

Walk Around

Mosquito



DON GREER



Walk Around Number 15
squadron/signal publications

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de Havilland Mosquito

By Ron MacKay

Color by Don Greer

Illustrated by Richard Hudson



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Introduction

This project began in positive fashion, was blunted for some time by a tragic turn of fate, and finally brought to maturity. My initial attention had been concentrated on the Mosquito Air Museum which possesses not only a late model 'Mossie' B Mk 35, but also W4050 — the original prototype for De Havilland's superb 'Wooden Wonder'. Access to the T Mk III (with which to illustrate the fighter version of the Mosquito) operated in flying condition by British Aerospace had been provisionally agreed upon when the aircraft and its two-man crew were lost in an airshow accident. Fortunately an alternative source subsequently came to light with a visit to the Yorkshire Air Museum where Tony Agar's Mosquito had been patiently constructed (literally from nothing) over many years. Although only a portion of the overall airframe is vintage NF Mk II, the aircraft provided sufficient detail to outline the De Havilland design as intended to operate in a fighter-bomber role.

The Mosquito will always hold a place of great affection in the minds of all those who either flew her in combat during World War Two, or who have an interest in the conduct of that conflict. Along with the Spitfire, Hurricane, and Lancaster, the Mosquito completes the quartet of truly preeminent British military aircraft whose marriage to the Rolls-Royce Merlin aero-engine granted the RAF a platform with which to properly and fully prosecute the war in the air.

Acknowledgements

Many thanks to the staff of the Mosquito Air Museum for permitting unlimited access to their collection of preserved Mosquitos. My thanks are also directed specifically to Ian Thirsk, Ron Ayres, and Bruce Gordon for their assistance on all technical matters. Equal gratitude is expressed to Tony Agar at the Yorkshire Air Museum — his assistance in photographing the NF Mk II was to prove particularly invaluable. Colin Francis provided superb photographic results as ever.

PHOTO CREDITS

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Imperial War Museum (IWM)

(Front Cover) Mosquito FB VI (SD*V/MM403) of No. 464 Squadron, RAF roars past a smoking Fw 190 during low level intruder operations behind the Normandy beaches in June of 1944. This aircraft had also taken part in the famous attack on Amiens Prison to free resistance personnel captured by the Germans. MM403 was lost on the night of 17 January 1945.

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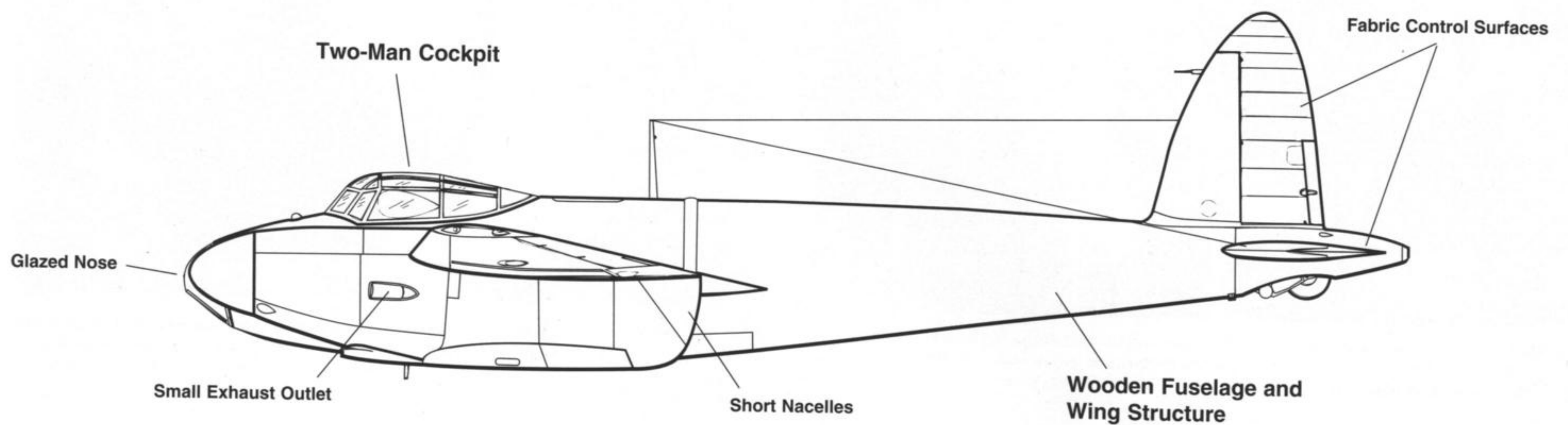
(Previous Page) A Mosquito NF II (DD739) cruises between layers of cloud sometime during 1943. The aircraft was assigned to No. 456 Squadron which was re-equipped with Mosquito NF IIs in late 1942. Mosquito DD739 was lost on a bomber support mission to Kassel, Germany on 4 December 1943.

(Back Cover) Mosquito NF II (RS*B/W4087) of No. 157 Squadron, RAF is prepared for a night mission shortly before dusk in late May of 1941. No. 157 Squadron is believed to be the first RAF night fighter unit to operate all black Mosquitos in the night fighter role.



Mosquito Prototype

The Mosquito prototype (W4050) was first flown on 25 November 1940. The prototype was used as a trials aircraft and went through several modifications during World War II. It is now retired to the Mosquito Museum at Salisbury Hall north of London.

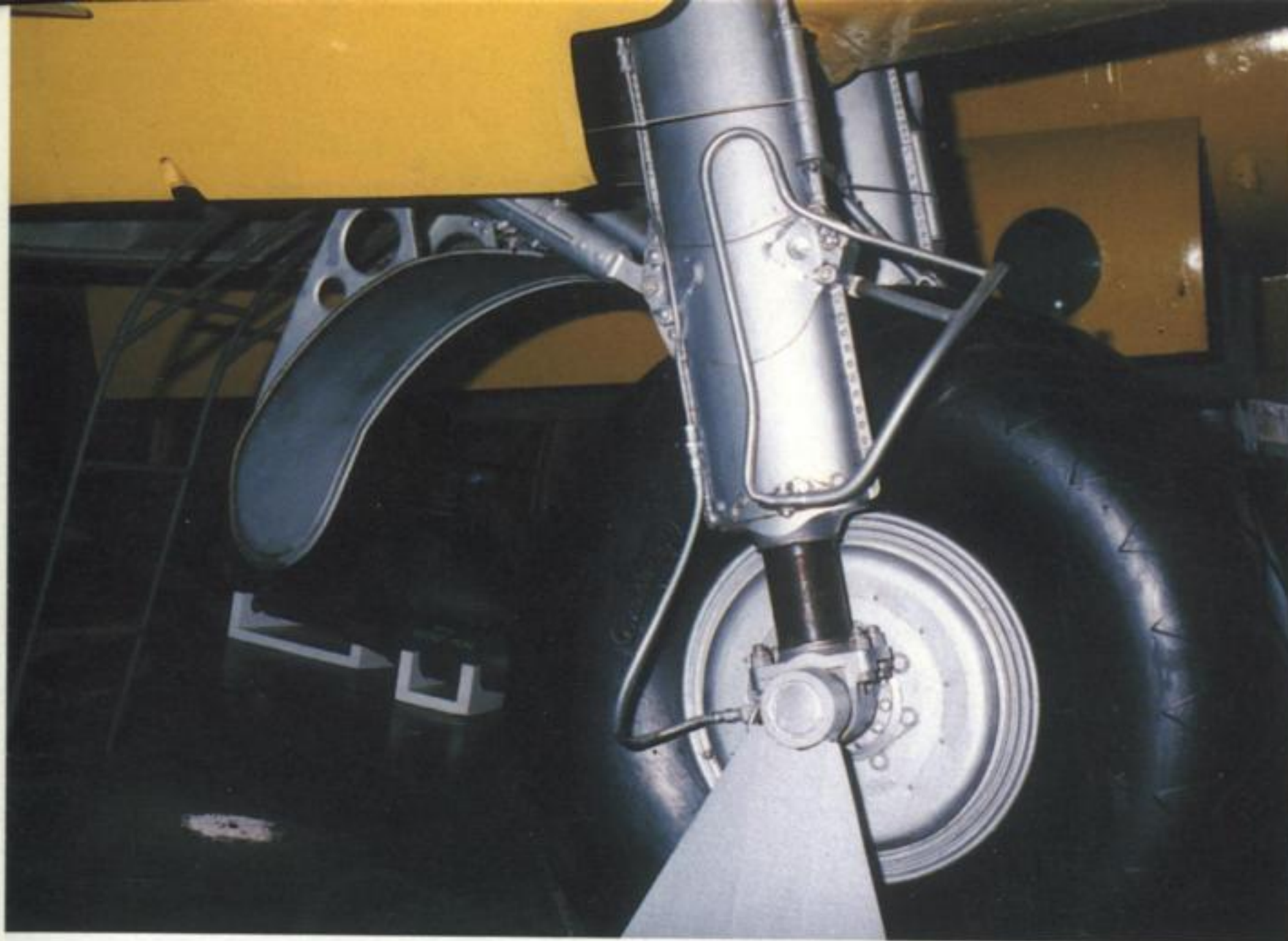




Early variants of the Mosquito were equipped with single stage Merlin engines and a slim cowl. Early Mosquitos used needle-bladed propellers, while later variants used the paddle-bladed units depicted here. W4050 is also fitted with a blunter Lancaster type spinner.

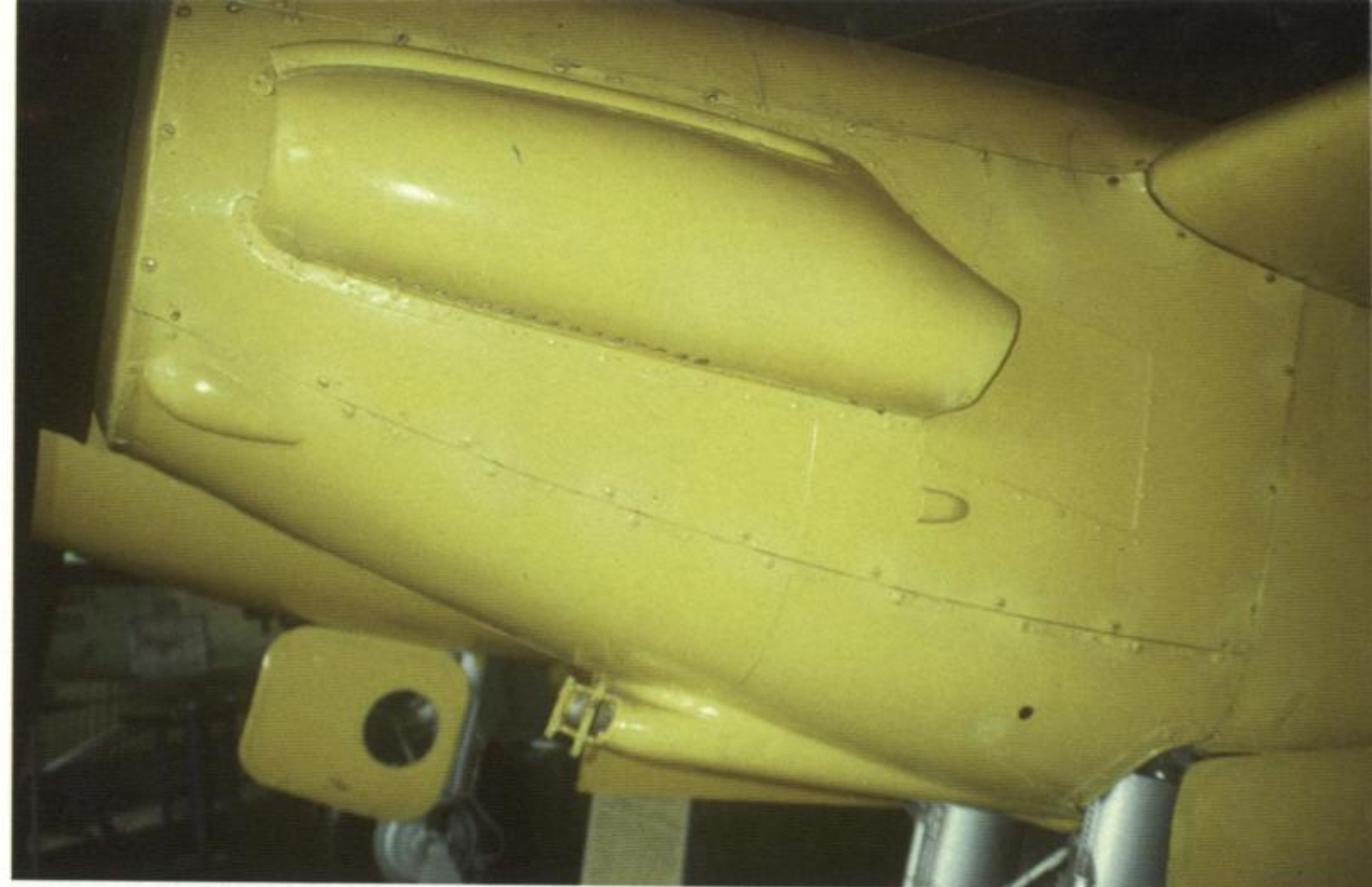


The main landing gear of W4050 consists of two vertical De Havilland compression struts linked by a series of cross braces above the wheel. The tire is mounted on a tubular steel axle joined at the lower end of the compression struts. The entire unit folds back into the engine nacelle. The landing gear struts were normally painted silver.



The landing gear shock absorbers were rather unusual. The oval steel strut contained a series of eleven and a half rubber blocks and spacers, a bakelite piston, a rebound rubber block, and the telescoping strut. No hydro-pneumatic systems were involved. This system was used on all Mosquito variants except the Sea Mosquito which reverted to a standard hydraulic system for carrier deck landings.

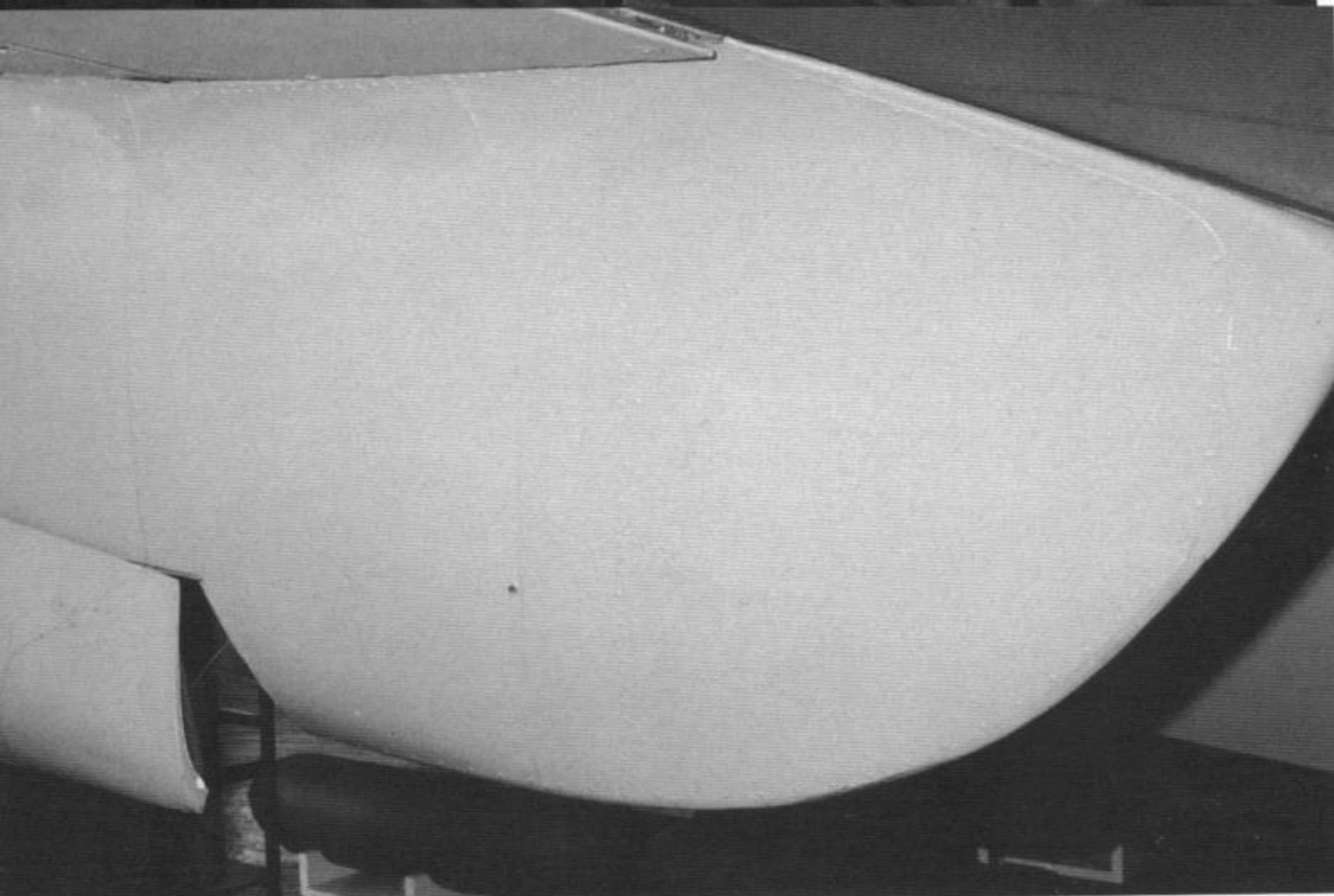
The Mosquito prototype was fitted with flame dampening exhaust shrouds during her career. The small duct on top of the shroud directs cooling air to the exhaust manifold, while the lower row of slots performs a similar function for the ends of the exhausts.



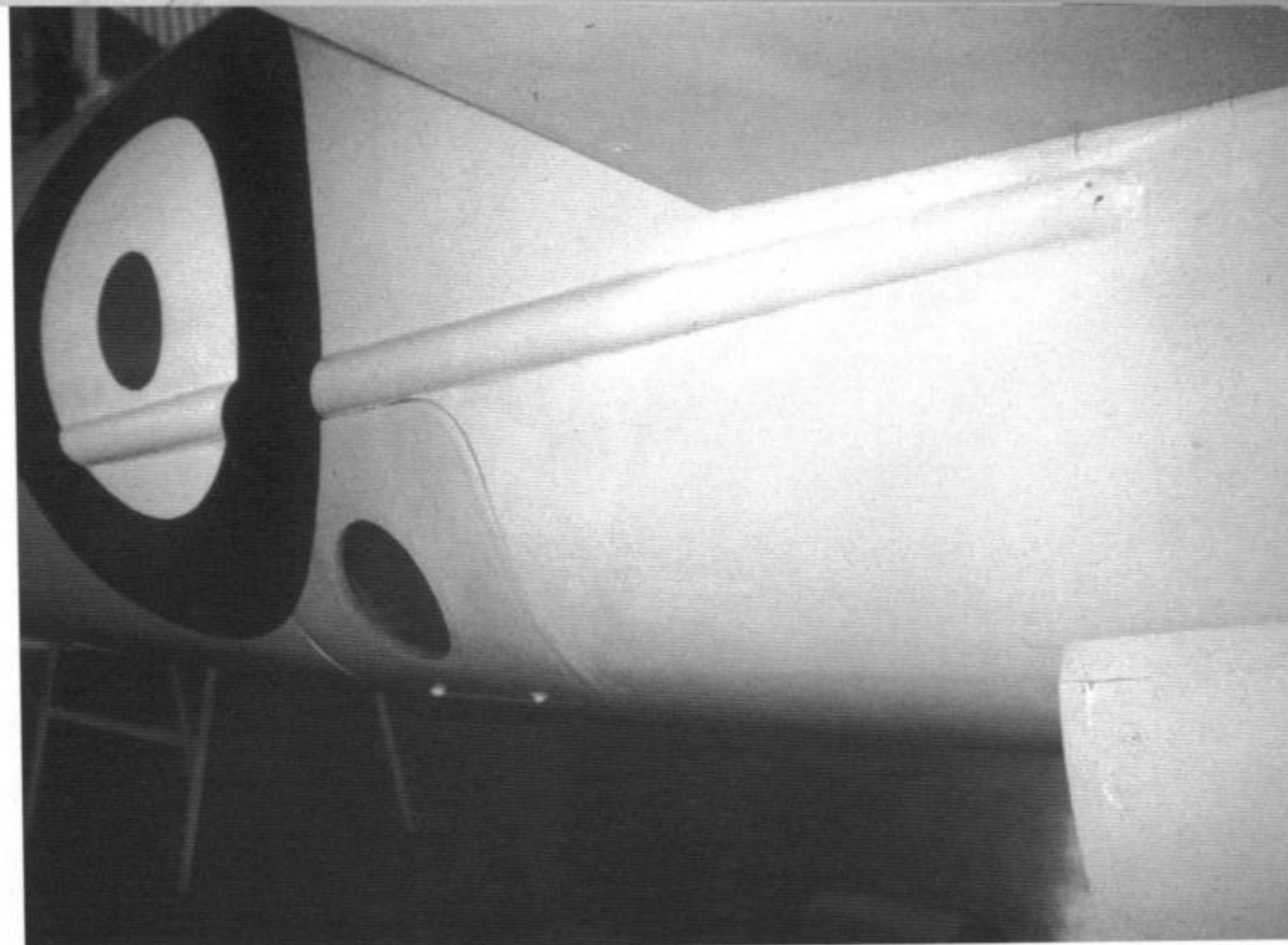
The bulge on the port side of the engine cowl covers part of the engine coolant pipe. Just behind and below the exhaust is the Inconel heat resistant panel used to protect the nacelle skin from the Merlin engine's exhaust. It is formed from a titanium-based metal. The fuel pipe cooling duct is in line with the end of the shroud.

The Merlin engine used an updraft carburetor which required the placement of the carburetor air intake below the engine cowling. Single stage supercharged Merlin engines used a small air intake mounted midway along the bottom of the cowl. The mesh ice guard was an optional fitting.





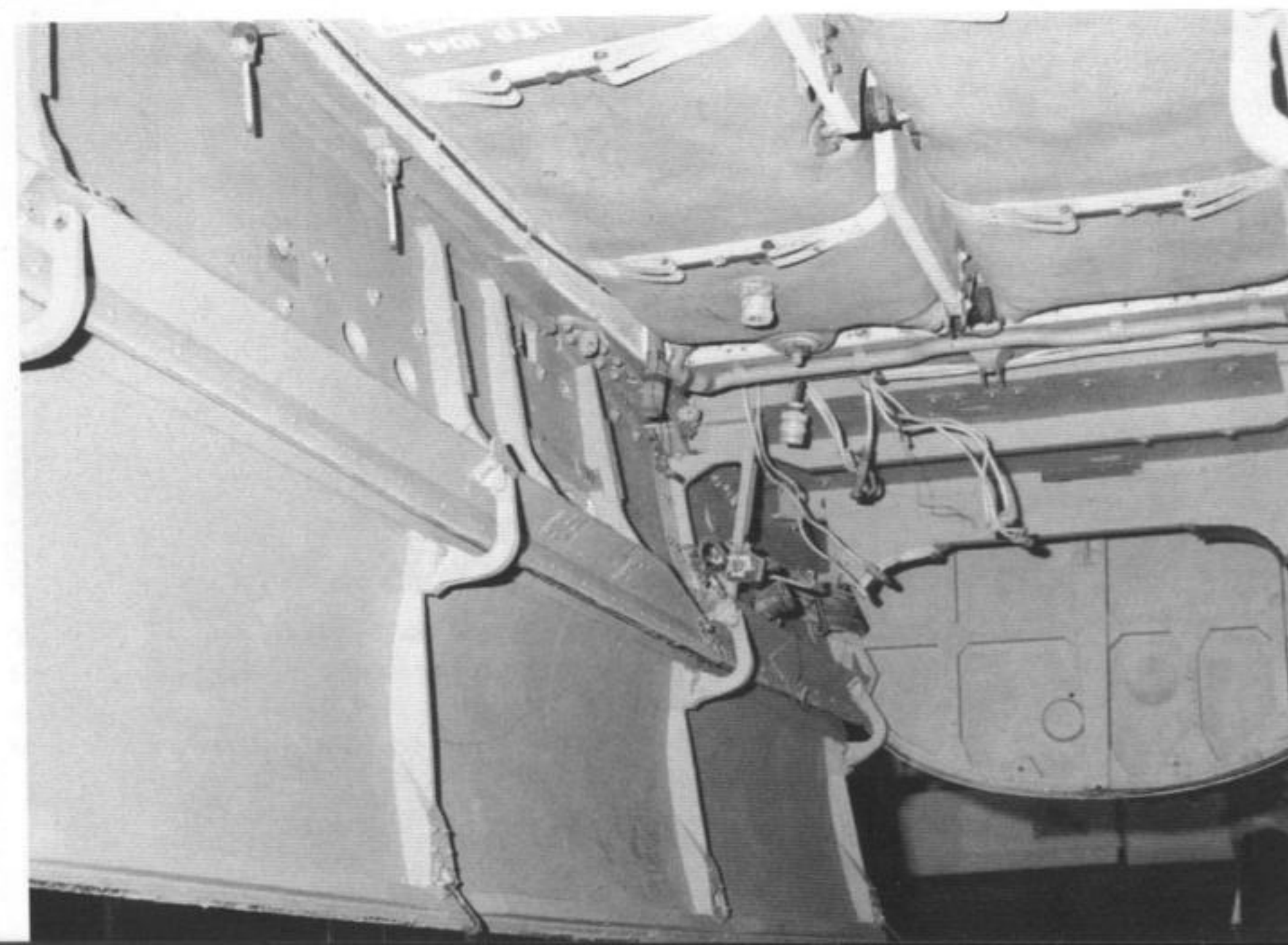
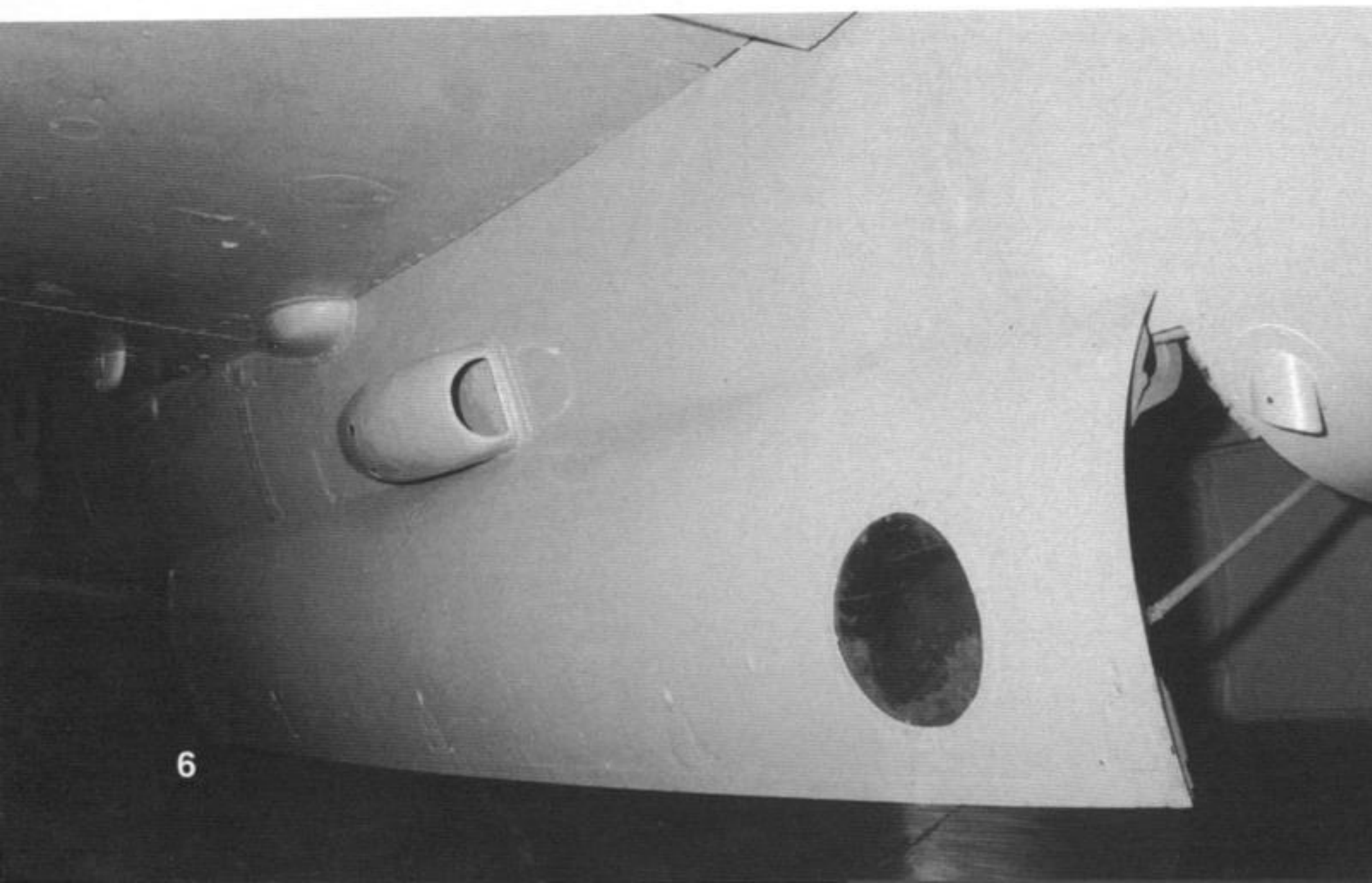
The original engine nacelles did not extend beyond the trailing edge of the wing. The short nacelles were used on Mosquito B Mk I and PR I aircraft, but were lengthened to improve air flow and lessen buffeting around the tail. Long nacelles were used on all later Mosquito variants.



W4050's starboard rear fuselage was strengthened with a strake following a fracture during testing. The strake was added to all subsequent Mosquito variants. The hatch provided access to the aft fuselage. The window in the hatch was used for flight testing and did not appear on production aircraft.

Five elbow hinges are used to attach the bomb bay doors to the fuselage. The air scoop provides cooling air for the center fuel tanks.

The elbow-shaped bomb bay door hinges pushed the door away from the fuselage as it opened. The interior of the bomb bay was painted grey-green (FS 34226). The bomb bay was designed for four 250 lb bombs. Later variants carried four 500 lb bombs. The larger bombs had shorter fins in order to fit within the bomb bay.





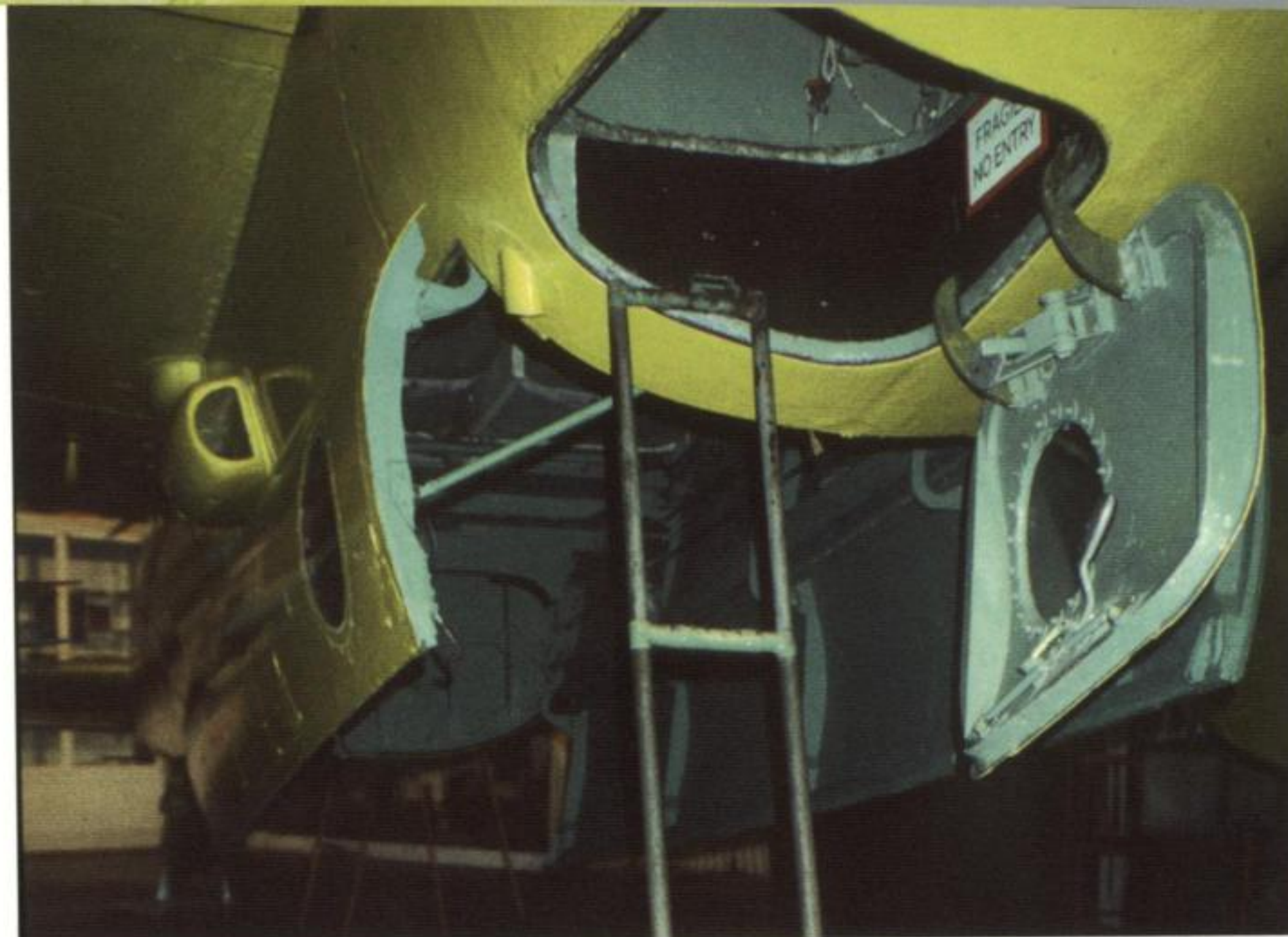
The bomb bay held two 70 gallon pressurized fuel tanks. A common collector box fed fuel to either or both engines. The tanks could also feed each other — for balance purposes — via the cross-feed pipes between the center and rear retaining straps.



W4050 carries the radio antenna attachment point further down on the leading edge than standard production aircraft. The location of the pitot tube remained standard on all production Mosquitos.

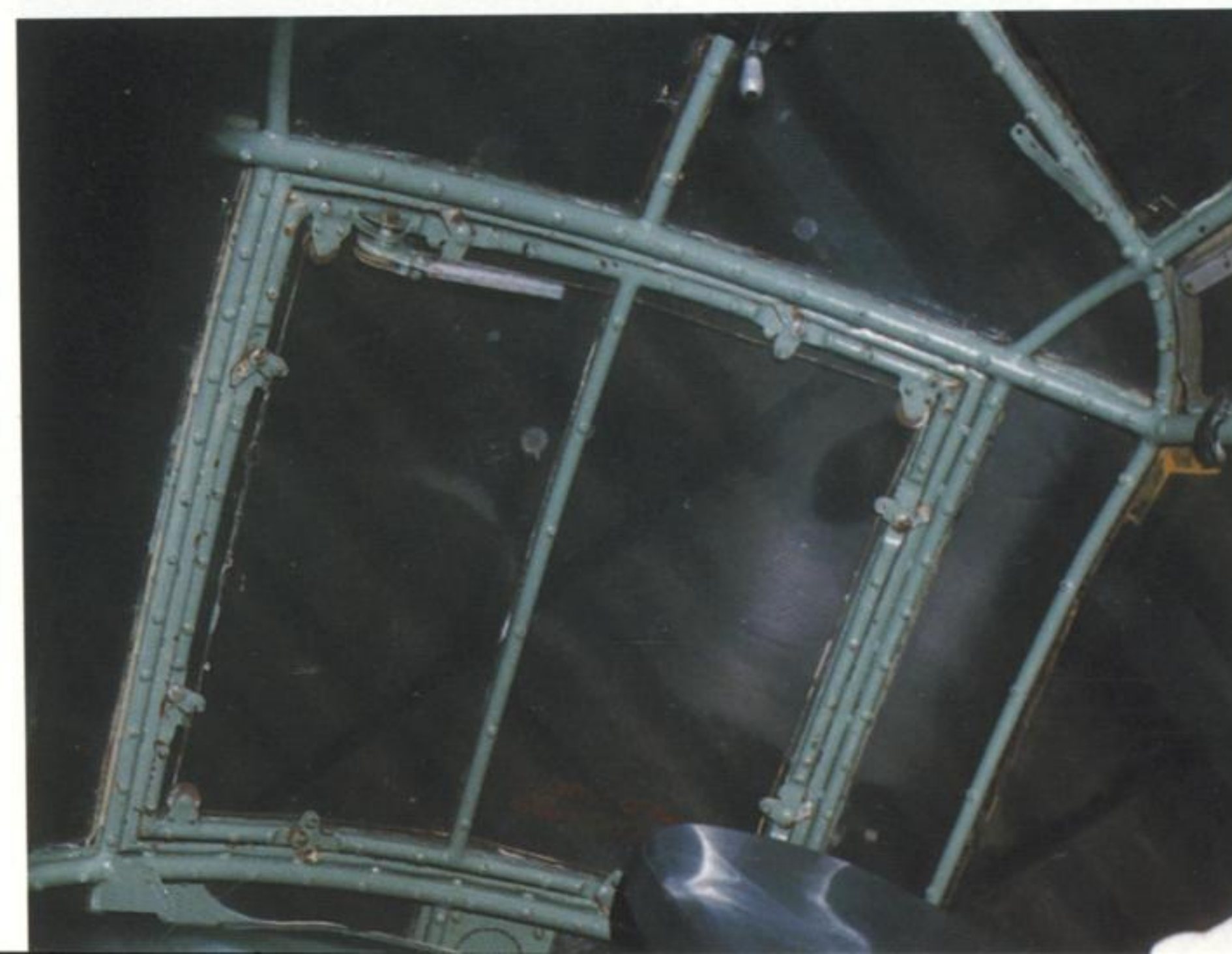


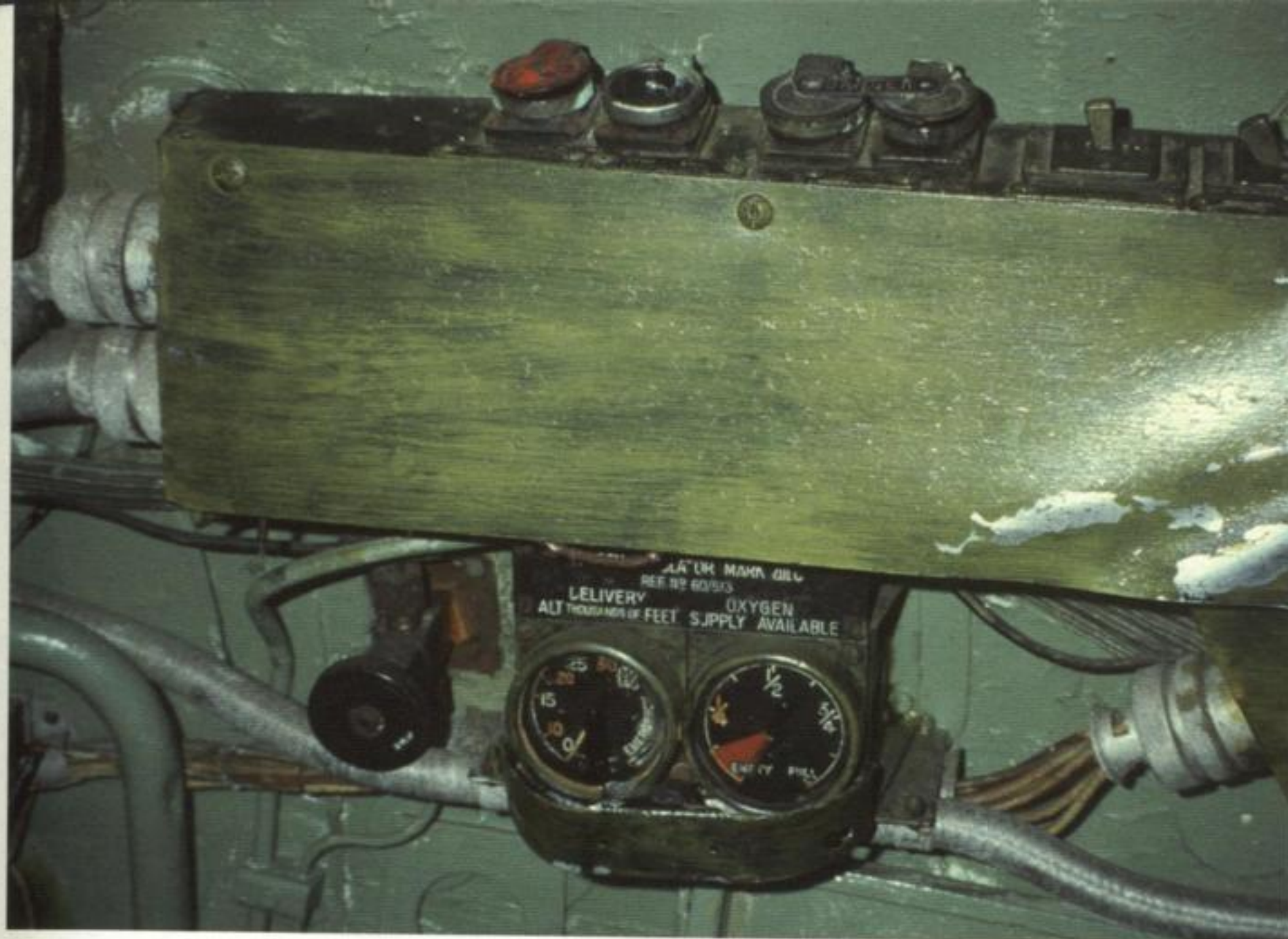
A perspex nose was common on the Mosquito bomber and photo-reconnaissance (PR) versions. The thick vertical reinforcing frame attached to the oval optical flat was replaced by a thinner version on later variants.



Entrance to bomber and PR Mosquitos was gained through a hatch located on the starboard side of the fuselage directly under the cockpit floor. A telescoping metal ladder was stored in a compartment in front of the hatch door.

The interior canopy framing was formed from metal tubes. An escape hatch was set into the center of the upper panel. A single release lever pulled a cable running around the periphery of the hatch, opening the latches, and jettisoning the hatch. The interior of the canopy frames was painted grey-green.





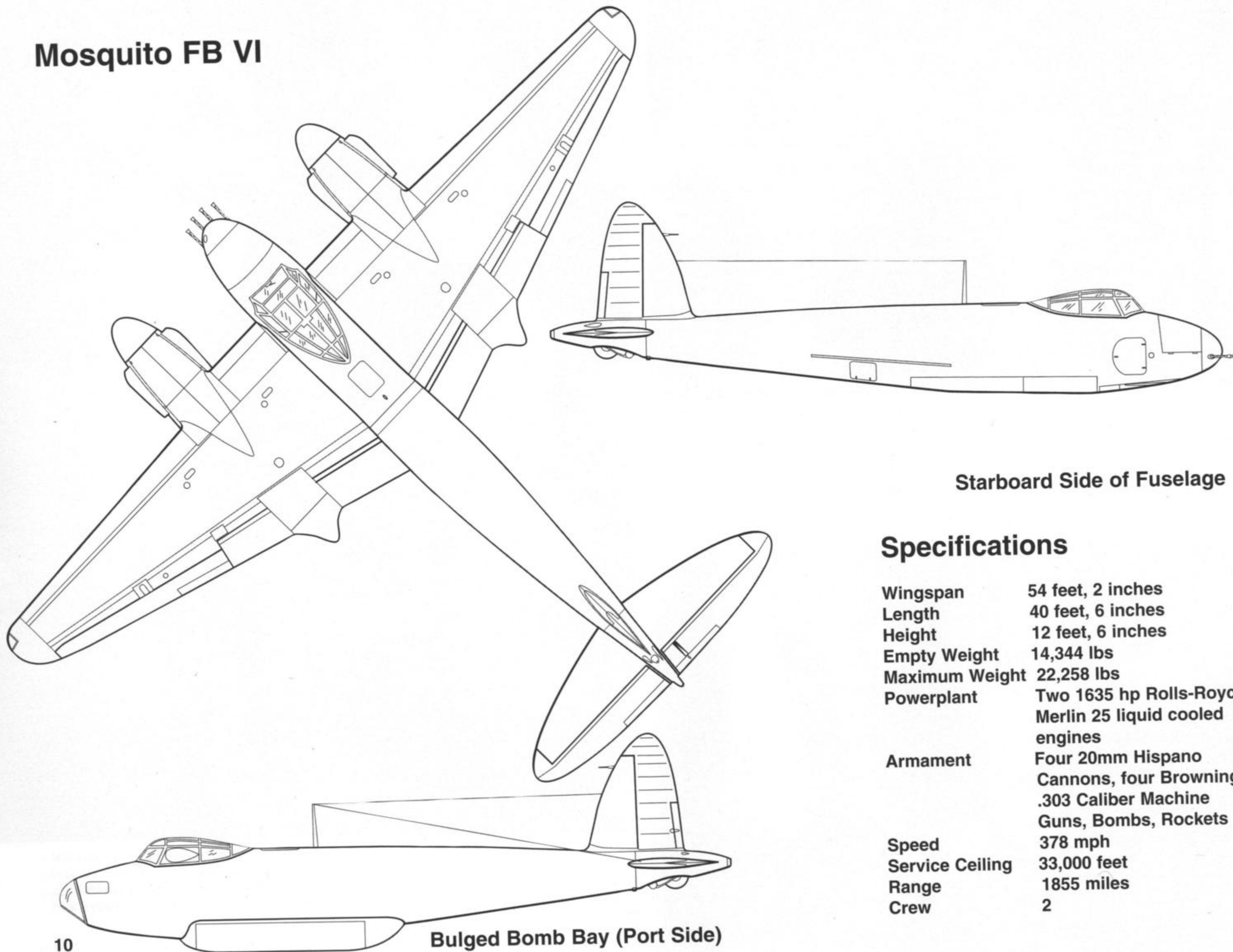
An instrument box was located on the right cockpit sidewall. The box contained the red engine fire extinguisher switches and the IFF detonator buttons. Oxygen monitoring dials are mounted under the electrical box. The prototype does not have a complete cockpit.

The rudder pedals were suspended from hinged tubes located behind the instrument panel. These pedals have the metal footrests replaced by wooden blocks. The footrests could be adjusted fore-and-aft by moving them from one slot to another. The pedals were normally painted grey-green.



Mosquito bomber and photo-reconnaissance (PR) versions were equipped with a control column and wheel. The lever and thumb button control the brakes. The elevator control tube (not visible) extends from the base of the column. The circular compass binnacle is mounted on the left cockpit sidewall, while the throttle quadrant is mounted above and behind it. The cockpit interior was painted grey-green.

Mosquito FB VI

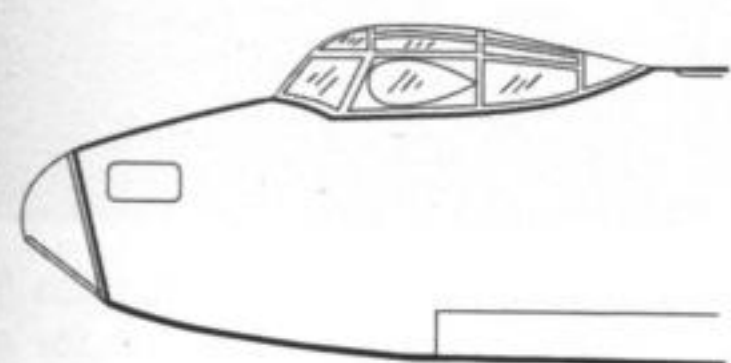
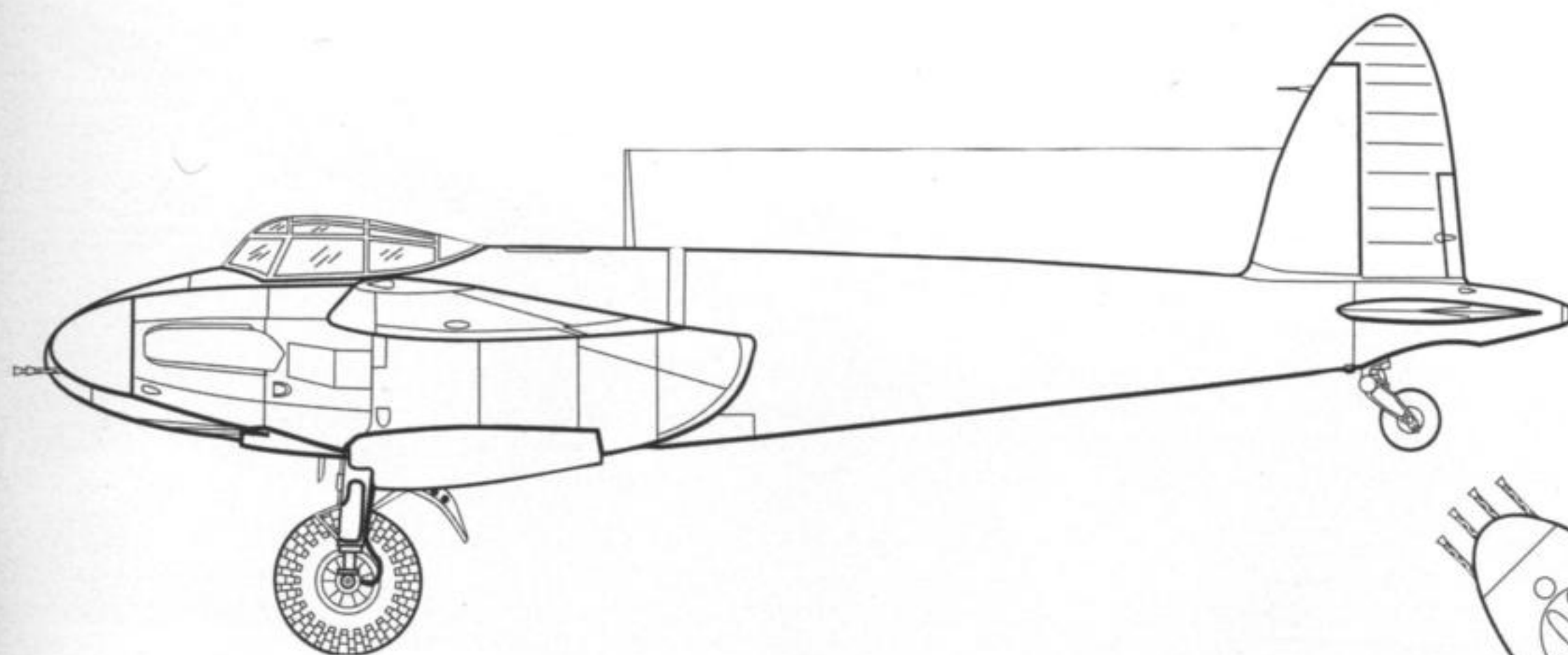


Starboard Side of Fuselage

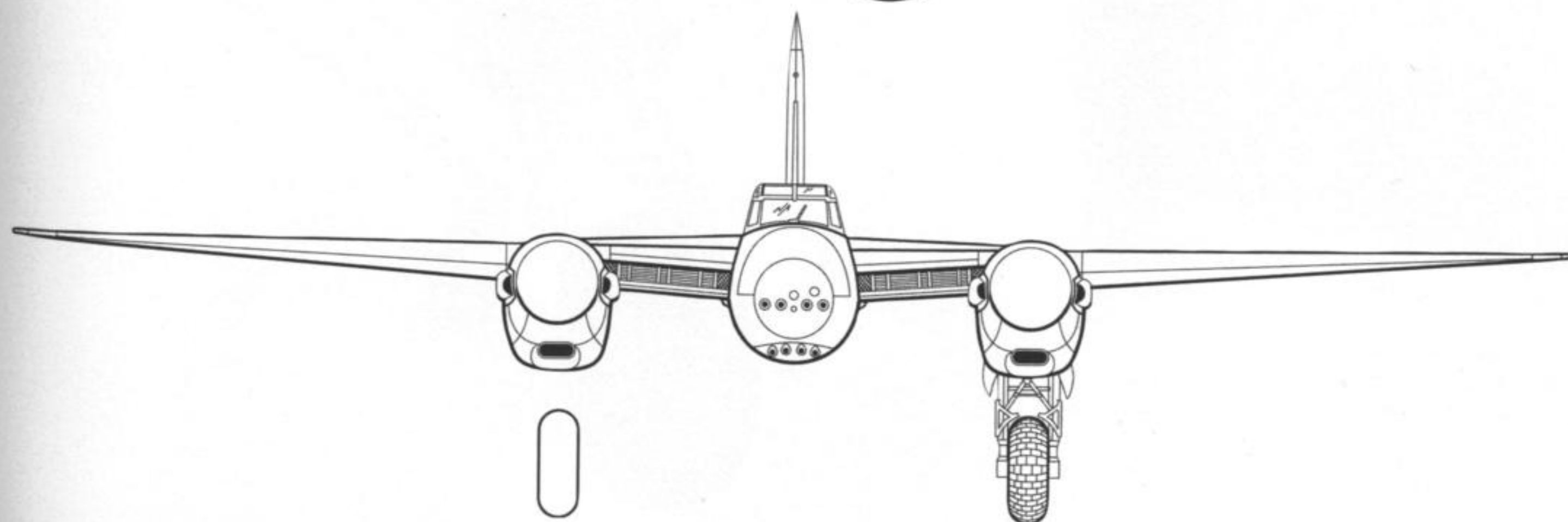
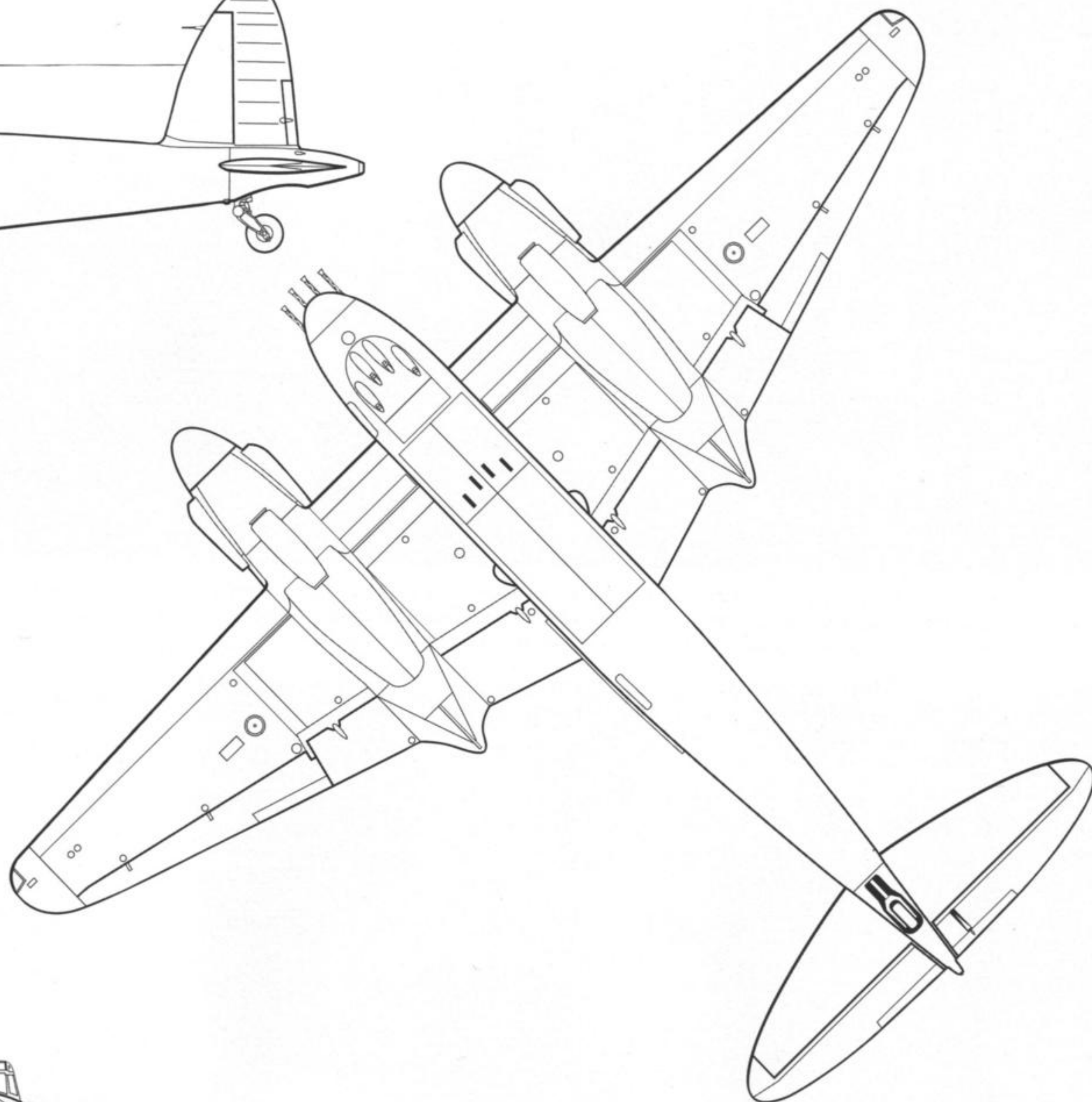
Specifications

Wingspan	54 feet, 2 inches
Length	40 feet, 6 inches
Height	12 feet, 6 inches
Empty Weight	14,344 lbs
Maximum Weight	22,258 lbs
Powerplant	Two 1635 hp Rolls-Royce Merlin 25 liquid cooled engines
Armament	Four 20mm Hispano Cannons, four Browning .303 Caliber Machine Guns, Bombs, Rockets
Speed	378 mph
Service Ceiling	33,000 feet
Range	1855 miles
Crew	2

Bulged Bomb Bay (Port Side)



Port Side of Nose

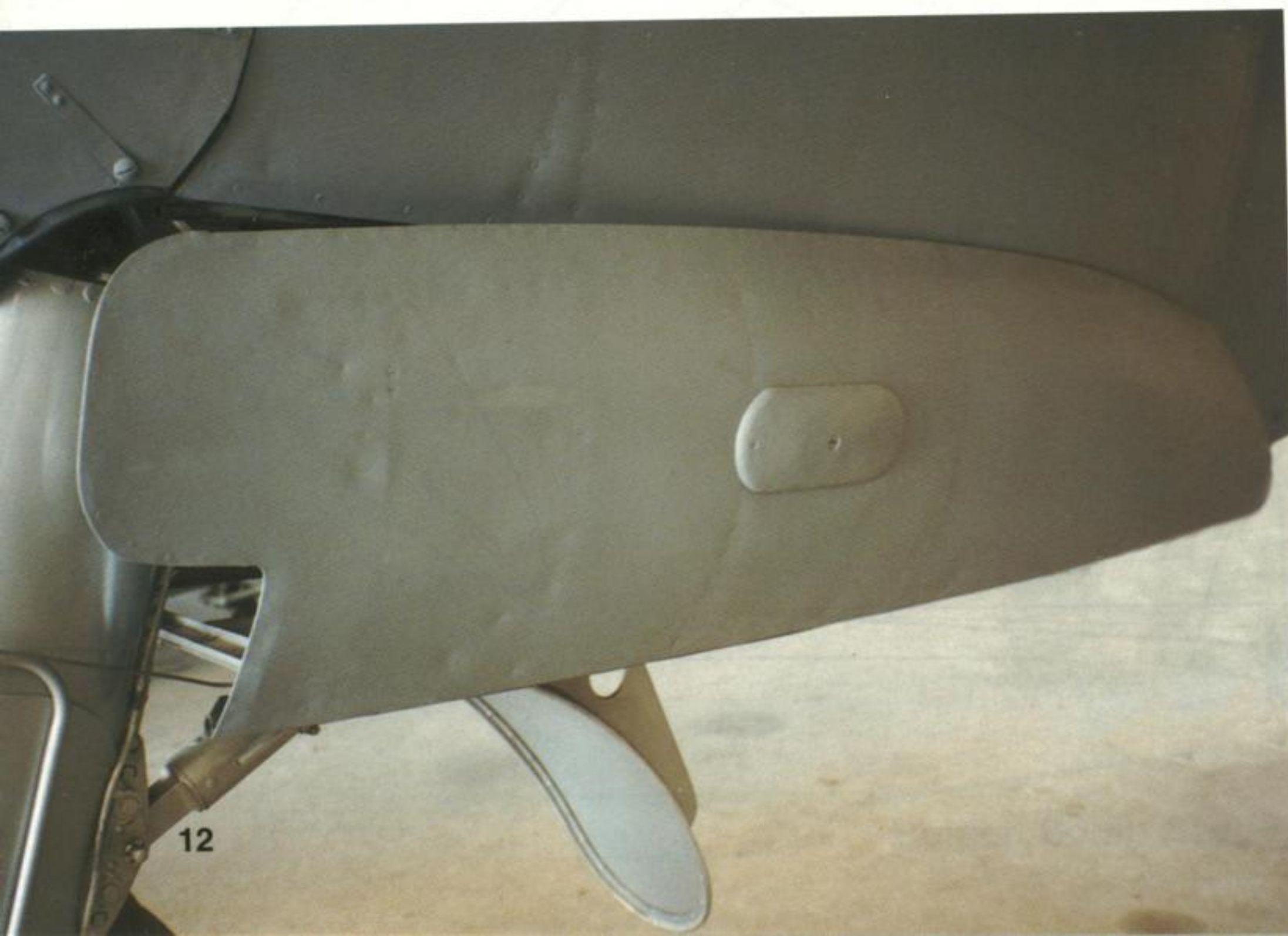


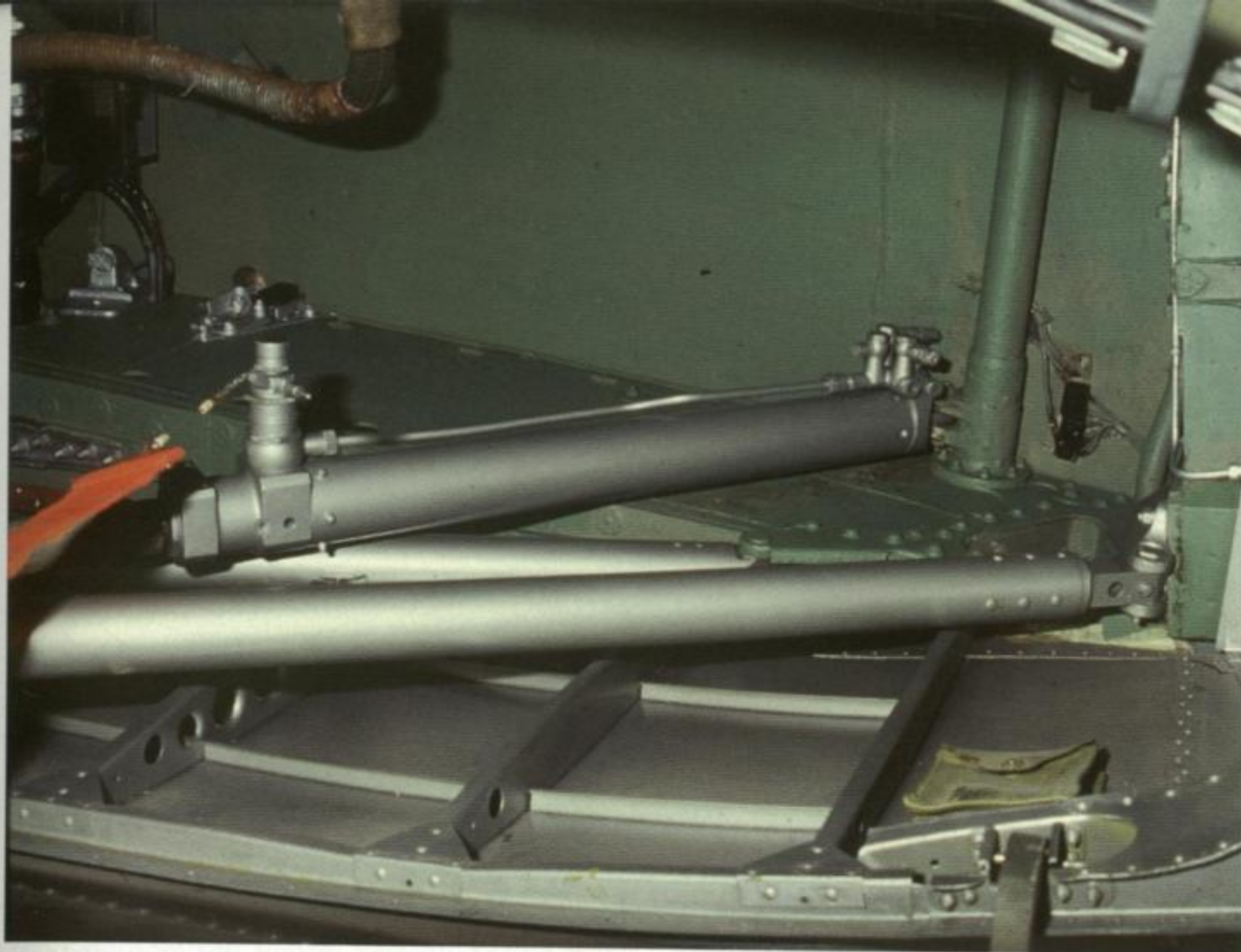


(Below) The distinctive landing gear doors were mounted on two elbow-shaped hinges which allowed them to stand away from the nacelle. A removable oval panel was placed onto the door to allow inspection of the landing gear retraction pulley system.

(Above) The Mosquito Air Museum at Salisbury Hall also possesses a Mosquito Mk 35. Although the aircraft was originally equipped for PR duties, it carries markings for a B Mk 35 operating with No. 571 (Pathfinder Force) Squadron in 1944/45.

Mosquito Main Landing Gear

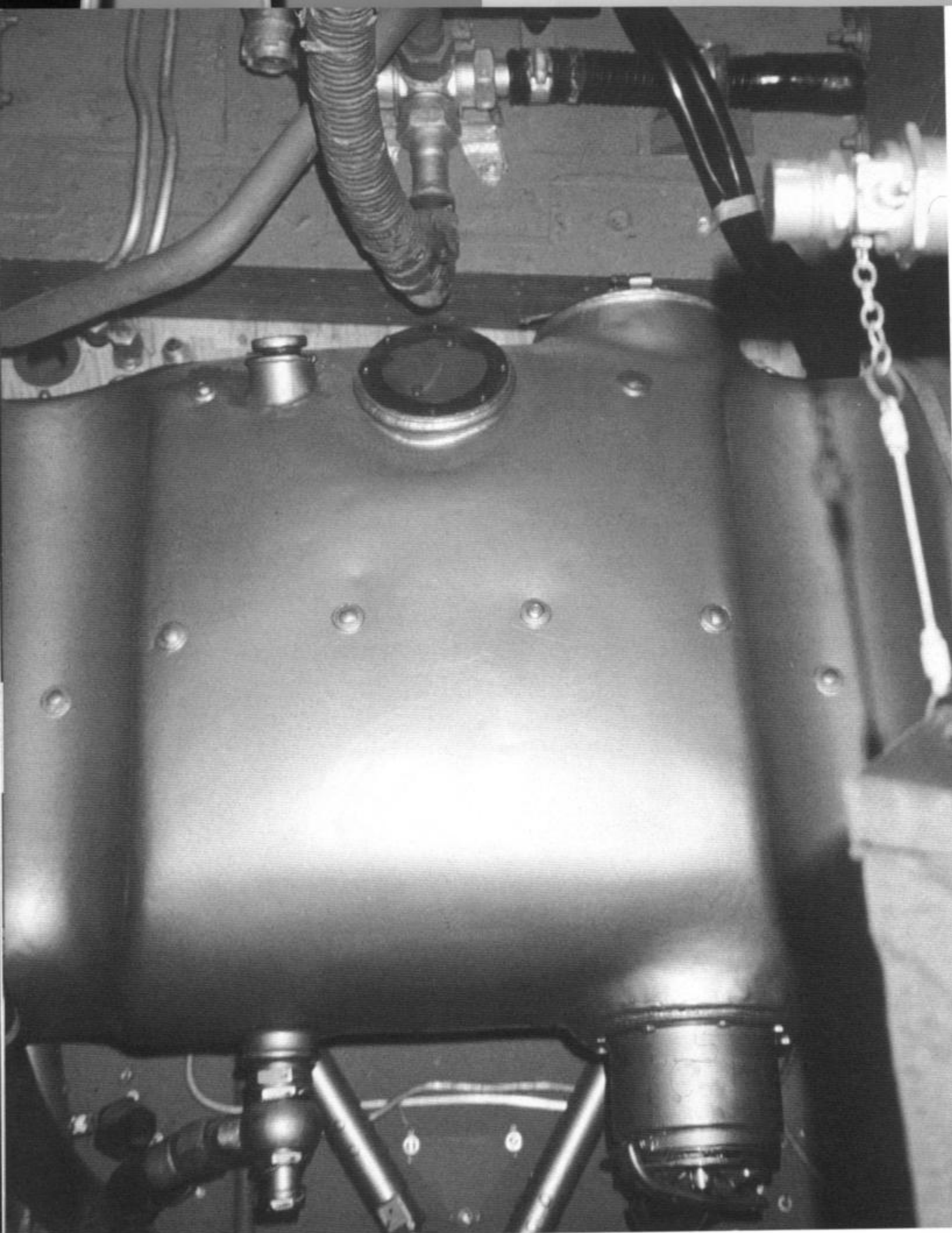




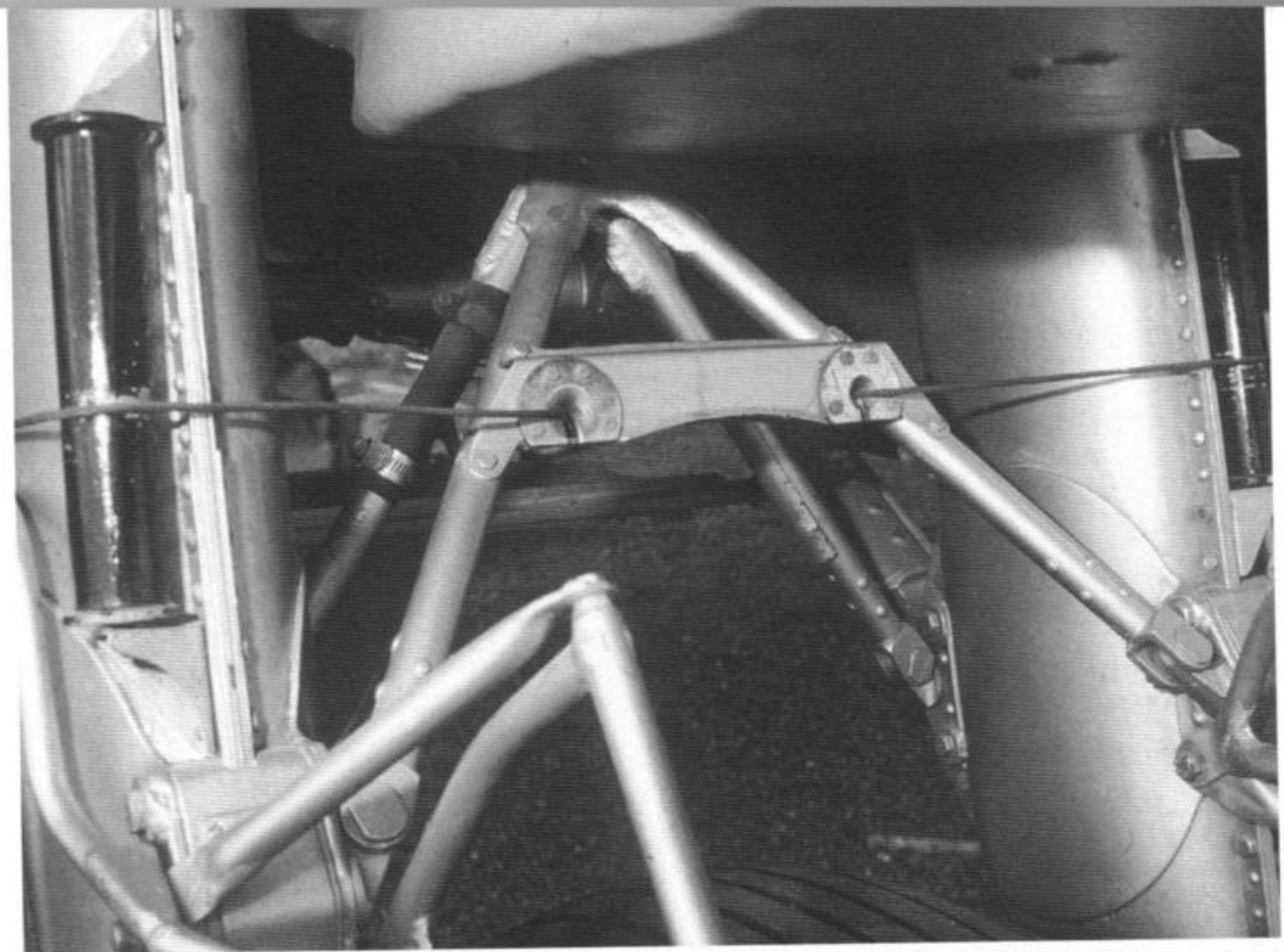
(Above and Below) A single hydraulic jack attached to the right radius rod retracted the landing gear. The radius rod pulled on the elbow joint in the right radius rod which collapsed the rod and pulled the compression struts back and up. Transverse rods carried the load from the right strut to the left strut.



Mosquito wheel brakes were pneumatically operated by a compressor driven by the port engine. Operating air was fed from the compressor via a pipe attached to the rear of the compression strut. Maximum pressure was approximately 100 pounds per square inch. The solid wheel hub holding two brakes was the most common style used on the Mosquito. Early variants used a spoked outer hub with a single brake.



Non-self sealing oil tanks were mounted on the rear face of the forward wheel well bulkhead. The tanks had a 15.75 gallon capacity and were filled via the capped oil filler port on the side of the tank. A dipstick used to check the oil level was located to the left of the cap. The tanks featured a rapid warming chamber and a reserve supply for feathering the propellers.



The front struts used a cable and roller system to extend and retract the landing gear doors. When the gear struts retracted aft and up, the wire pulled the landing gear doors closed behind them.

The retractable tail wheel used a similar shock absorbing design to that of the main landing gear. The fully castoring and self-centering wheel was mounted between a pivoting cantilever fork.



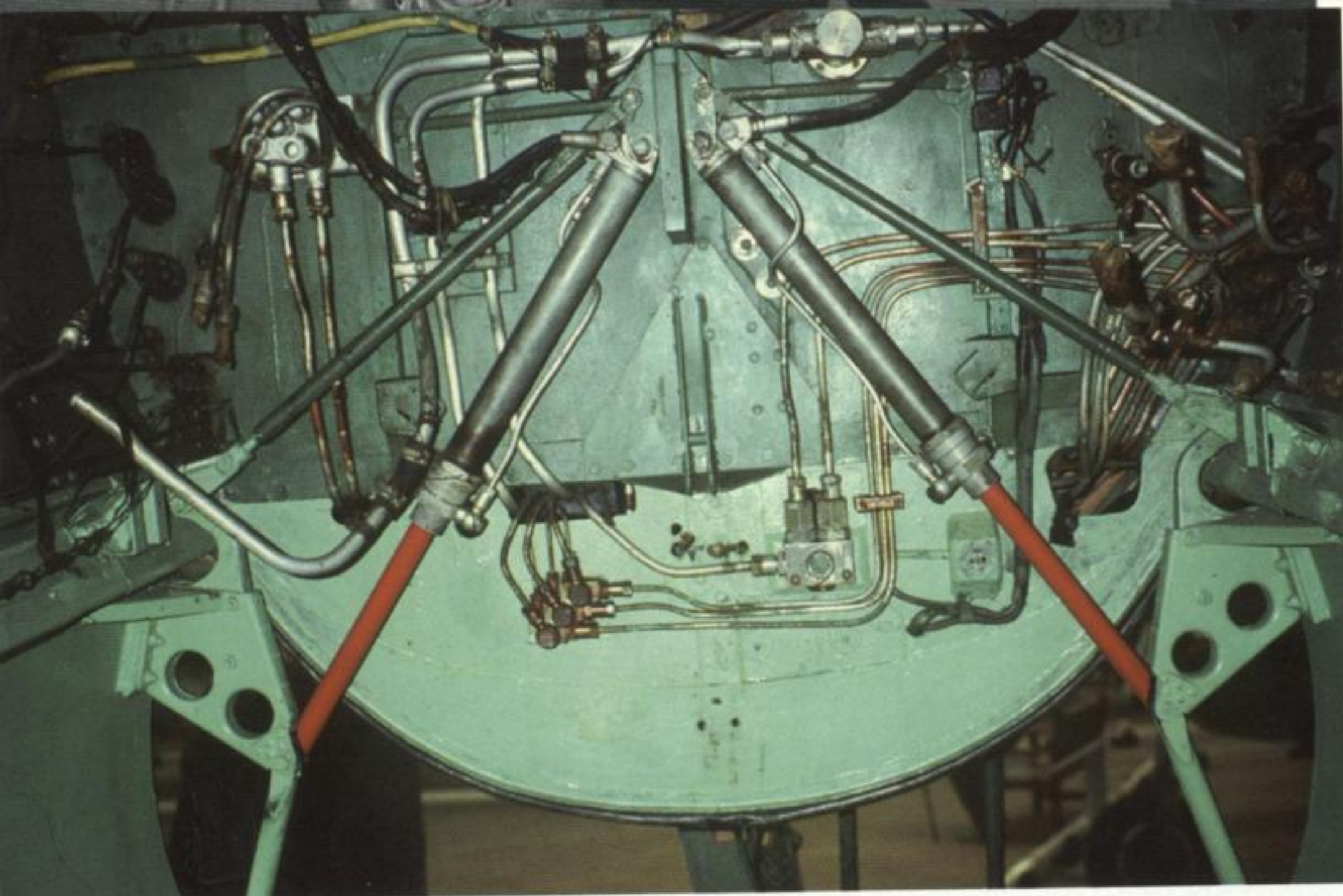


A tow bar could be fitted to the lugs at the end of the tail wheel fork. The towing arm could be pivoted up to 45 degrees left or right. The tail wheel was retractable, but not enclosed by doors. A small part of the tire remained visible below the fuselage.

A removable fairing under the horizontal stabilizers provided access to the tail wheel bay. Three front and two rear quarter turn fasteners held the fairing panel in place. The fasteners were held in place by metal strips riveted to the panel. A wing fuel drop tank is upside down behind the tail wheel.



Early Mosquitos were fitted with standard tail wheel tires. Most, if not all, later Mosquitos were fitted with these special Dunlop anti-shimmy tires with the larger diameter outer edges. The edges prevented the wheel from excessive wobbling during taxi, take off, and landing.



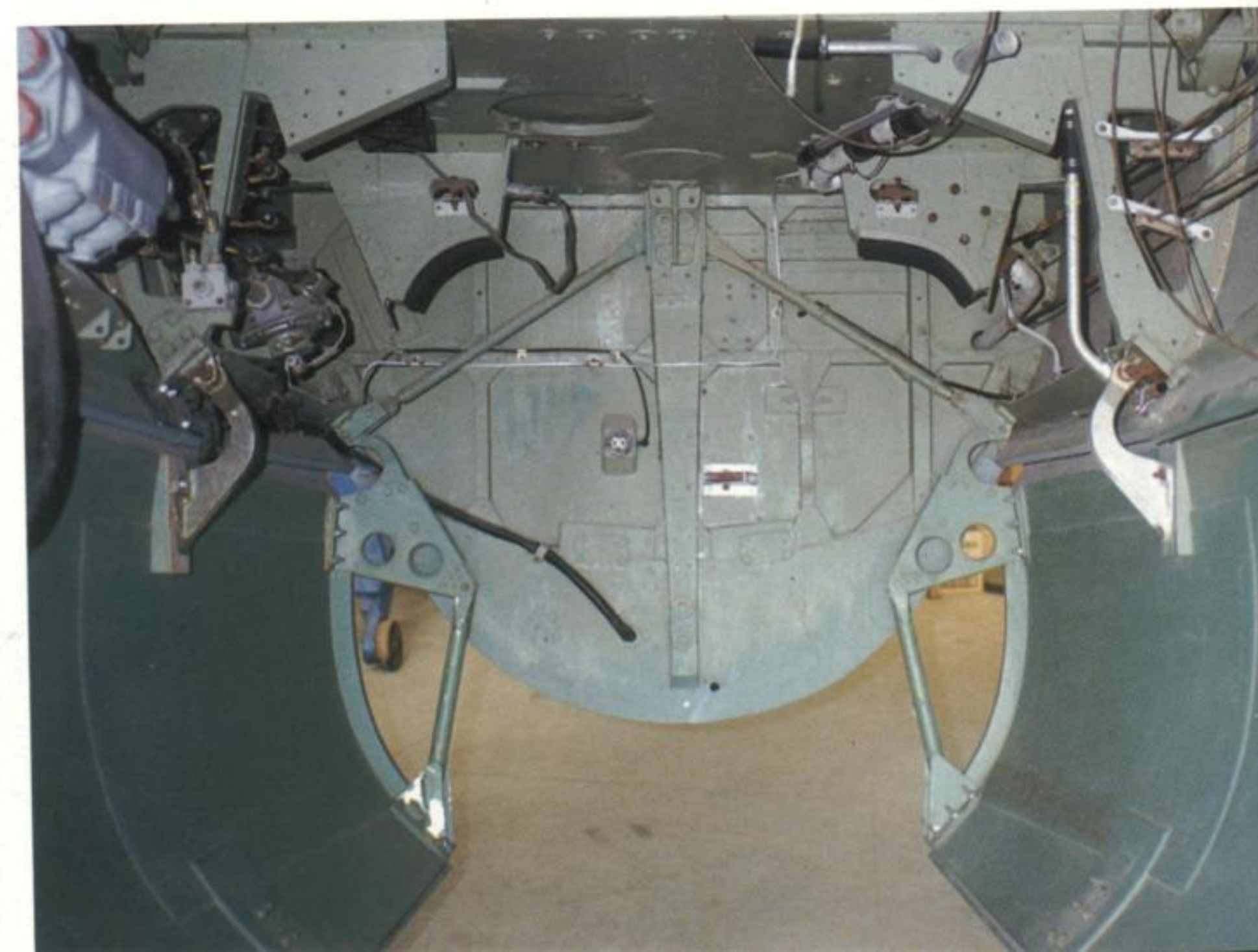
Hydraulic jacks mounted on the bomb bay forward bulkhead were used to retract the bomb bay doors. The hydraulic jack rams are fitted with a red sleeve.

Parallel longitudinal beams mounted in the bomb bay roof separated the bomb bay fuel tanks and strengthened the fuselage structure. The bay fuel tanks fitted into the semi-circular fittings in the roof and were held in place with the straps hanging from the sides.



The bomb bay fuel tanks were self sealing with red Linatex fabric. Both tanks were joined with a pair of crossfeed pipes. Tail surface control cables ran along the port wall of the bomb bay.

The aft edges of the bomb bay doors are fitted with the additional support arms. The interior of the bomb bay and doors was normally painted grey-green. Bomber variants could carry up to four 500 pound bombs in the bomb bay, while PR variants carried a variety of aerial cameras.





The aft fuselage and fixed tail surfaces were skinned with plywood and were relatively featureless except for stiffeners and access panels. The rudder and elevator were originally fabric covered, but later Mosquitos had the elevators skinned with metal.

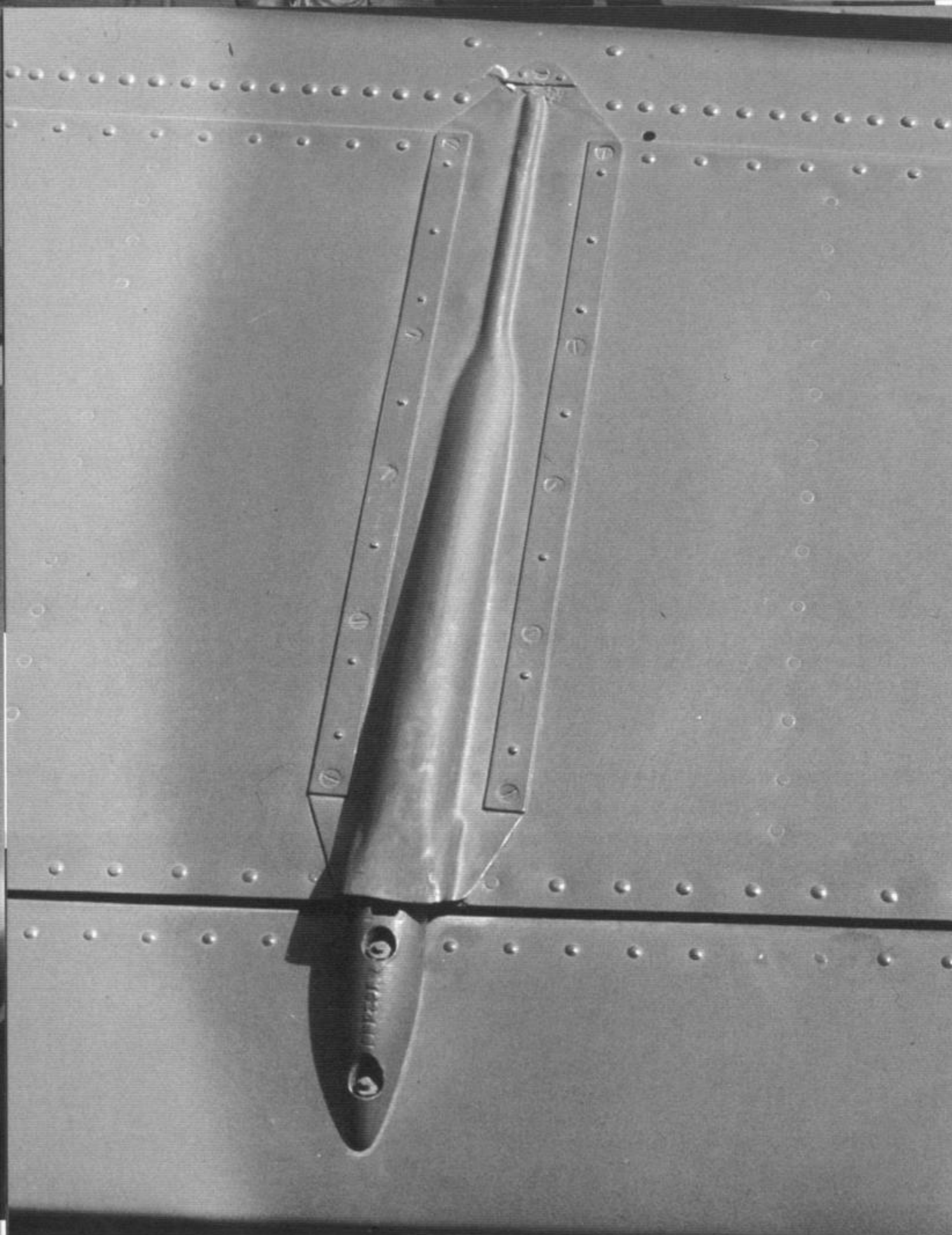
The gap between the vertical fin and fuselage was covered with a formed metal fairing held in place by six screws on each side. The circular metal plate covers access to the fin front spar attachment lugs.



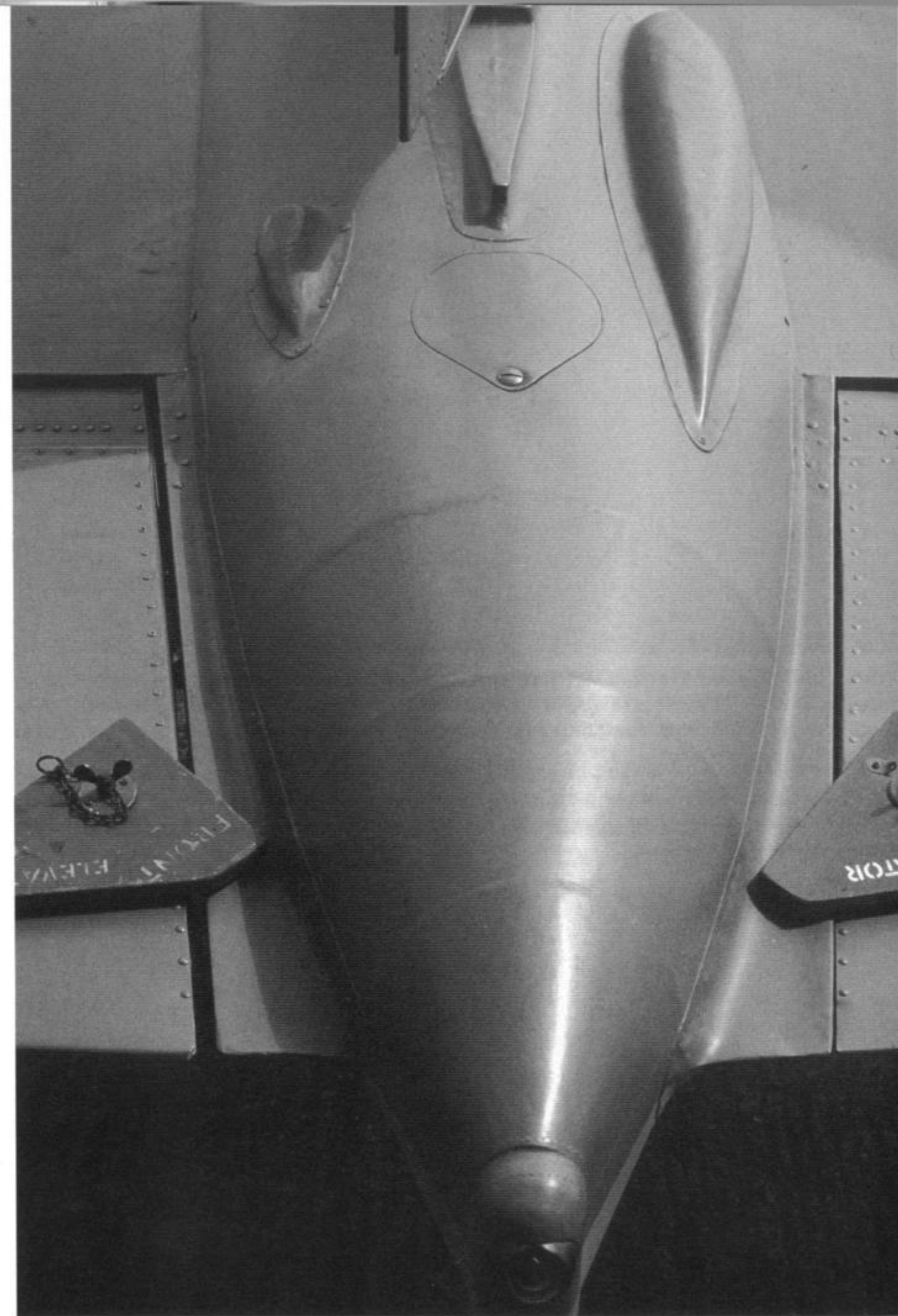
The fuselage aft of the tail wheel mounting bulkhead is covered with a multi-piece tail cone. The removable lower sections provide access to the tail wheel bay. The tail cone could contain one or two white navigation lights depending on the variant.

The port horizontal stabilizer had an antenna wire attachment lug set into the leading edge with a patch of doped fabric.

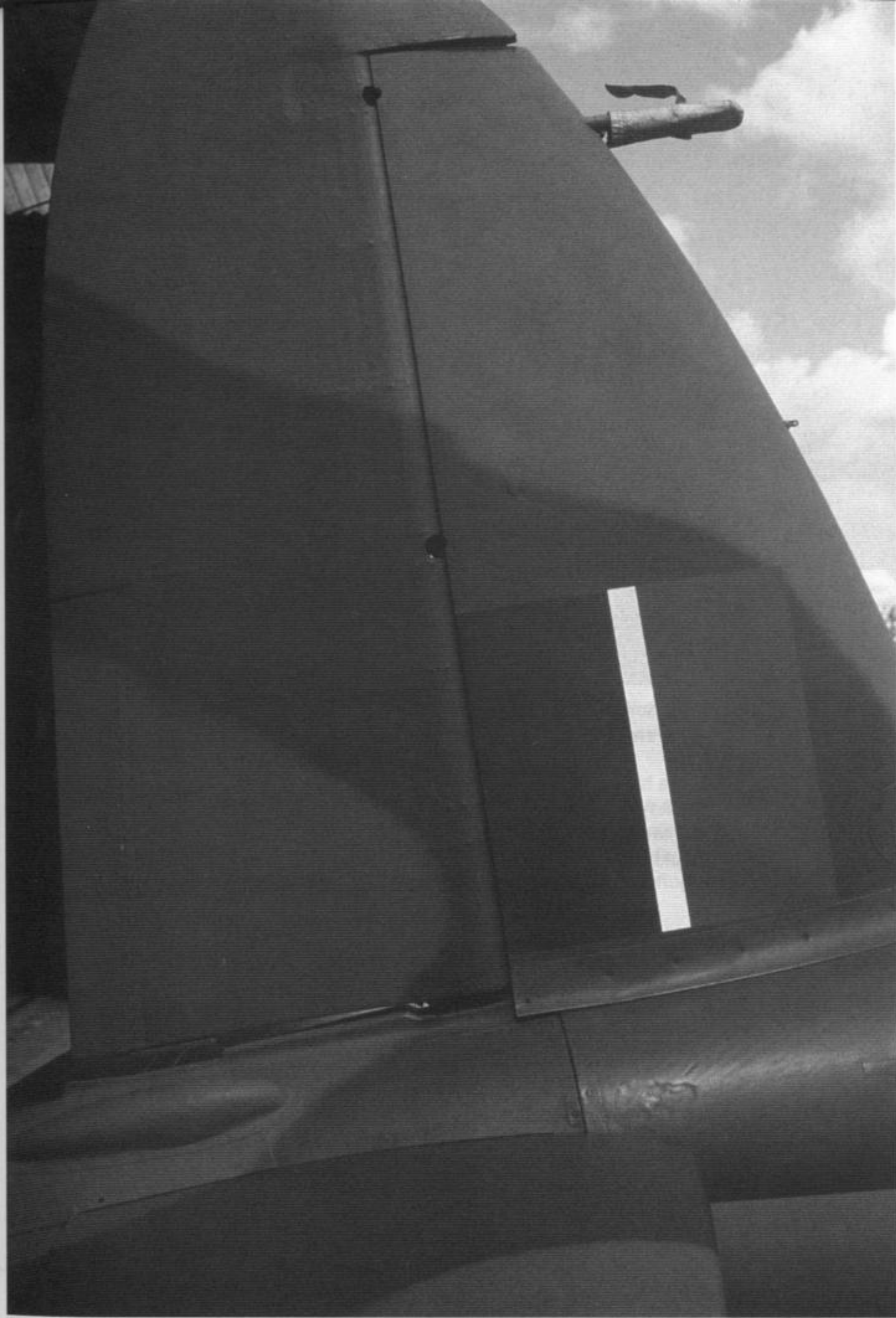




Trim tabs were set into the inner trailing edge of each elevator. The tab actuating rods were covered with a metal fairing. The fairing was on the upper surface of the starboard elevator and the under side of the port elevator.



The small teardrop shaped bulged cover on the left covers the elevator control arm and cables. The larger bulged cover on the right covers the elevator static balance. The semi-circular cover plate directly aft of the rudder provided access to the elevator's center hinge.



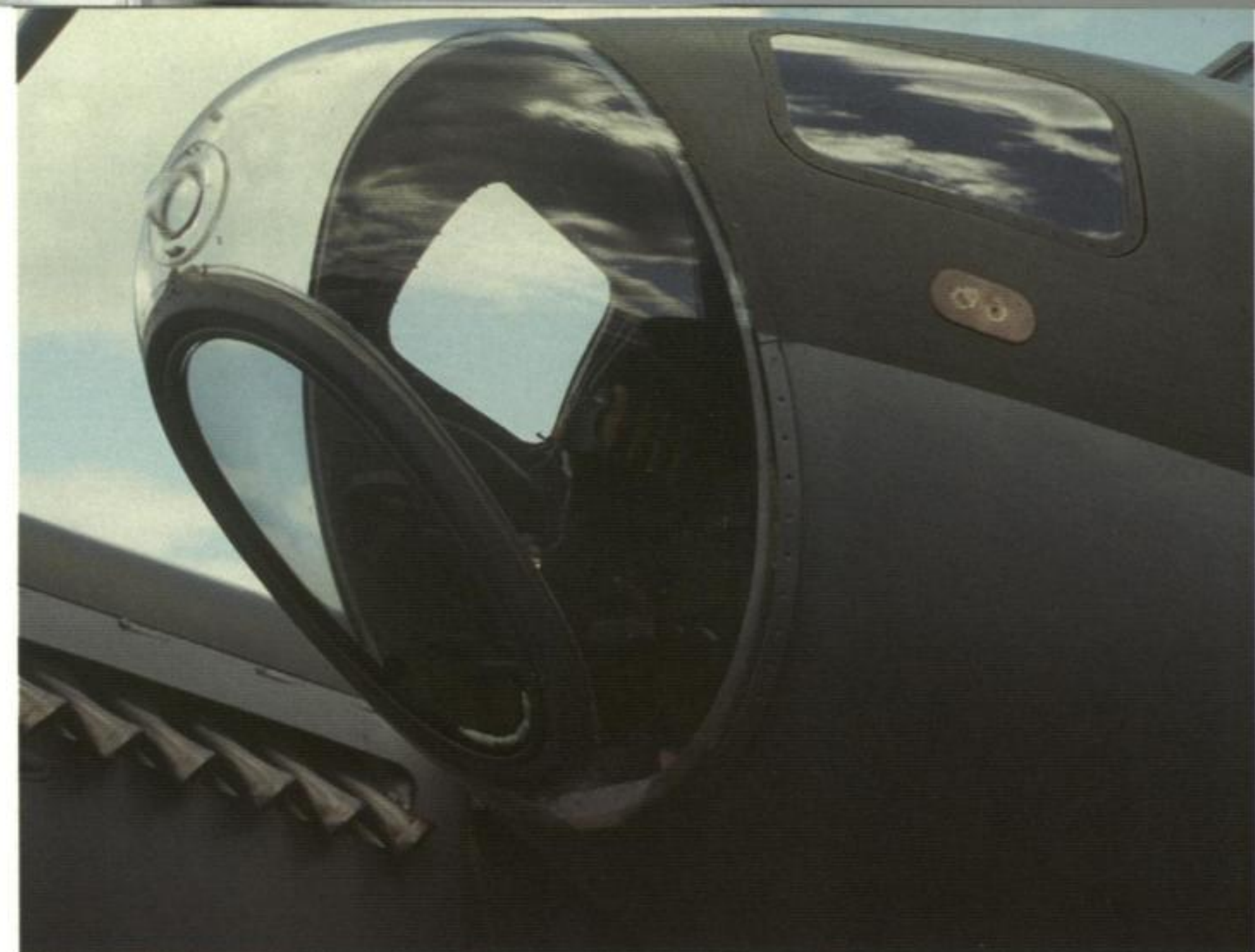
The vertical fin was constructed of spruce and plywood ribs attached to two wooden spars and skinned with plywood. The spars were then bolted to the two aftermost fuselage bulkheads. The leading edge of the fin also contained the pitot tube and an attachment lug for the radio antenna.



The rudder trim tab was located on the lower trailing edge of the rudder. The tab was actuated via a cockpit cranking lever and cables. The tab actuating rod was mounted on the port side of the rudder. A small mass balance projected forward from under the tab.



The Mosquito B Mk 35 featured the standard perspex nose glazing fitted to the bomber and PR variants. The small bubble above the optical flat covered a white navigation light. Some aircraft also had an inverted 'U' shaped tube above the optical flat for dispensing deicing liquid.



The observer's oval shaped front panel was optically flat to eliminate distortion. Two additional perspex panels were fitted into the sides of the nose. The nose compartment was extremely cramped.

The nose side windows were mounted in most of the bomber and PR variants. These aircraft also featured a pointed windscreen. A protective cover has been fitted into the radiator inlet in the inner wing leading edge. Bulged or blistered windows were common on bomber and PR Mosquitos, but less so on fighters and fighter bombers.





The exterior windscreen framing was characterized by large flat metal strips. The strips held armor glass and hinged front quarter panels.

The Mosquito canopy consisted mainly of metal tubes bolted and screwed to the fuselage. The windscreen was made from armor glass, while the remainder of the canopy was formed perspex. Bomber and PR aircraft had a pointed windscreen. An escape hatch was incorporated into the top of the canopy. Many bomber and PR Mosquitos were fitted with bulged or blistered side and top panels to improve visibility.



The emergency dinghy (raft) was located in a compartment directly behind the canopy. The dinghy contained glove type paddles, a signal pistol, emergency rations, and water.

The dinghy box was released and the dinghy inflated via an immersion switch or a manual release in the cockpit. The immersion switch functioned automatically when the aircraft was ditched.





The starboard side of the lower rear fuselage housed three downward facing identification lights. The lights were tinted red, green, and amber (yellow) from front to rear and were operated individually via switches in the cockpit.

Mosquitos were originally equipped with a fixed radio mast, however, many aircraft had the mast replaced by one or two whip aerials. Both the whip aerials and fixed masts were mounted into circular fittings on the aircraft spine.



A rear fuselage access hatch was located on the starboard side of the fuselage below and behind the wing trailing edge. The hatch allowed maintenance access to electrical, hydraulic, and other components contained within the aft fuselage. An external fuselage strengthening strake ran across the top of the hatch.

Later Mosquito variants were fitted with a 'universal' wing which had all the necessary fittings for a variety of roles and equipment — drop tanks, night fighter radar aerials, and strike aircraft rocket and bomb racks. This aircraft is also fitted with a paddle bladed propeller.





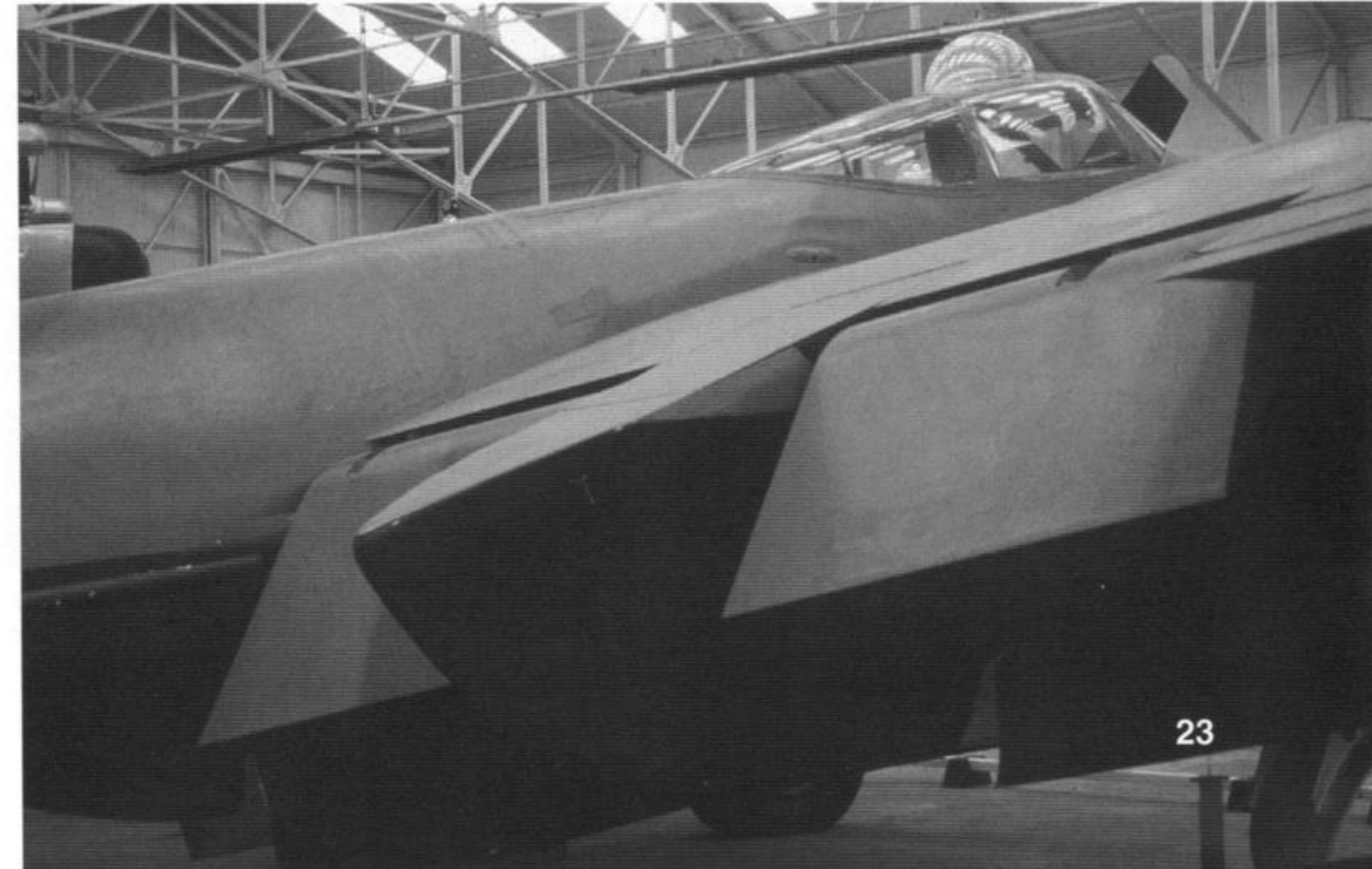
The wings were primarily built of spruce and plywood ribs and stringers which were covered with plywood sheeting. All seams were filled and smoothed, leaving the surface broken only by the control surfaces and various access covers. The wing surfaces could support a load factor of 41 tons.

Teardrop-shaped wing tank fuel filler access ports were located on the upper wing surfaces on both sides of the engine nacelles. The rectangular panel covers one of four fuel tank vent pipe access holes.



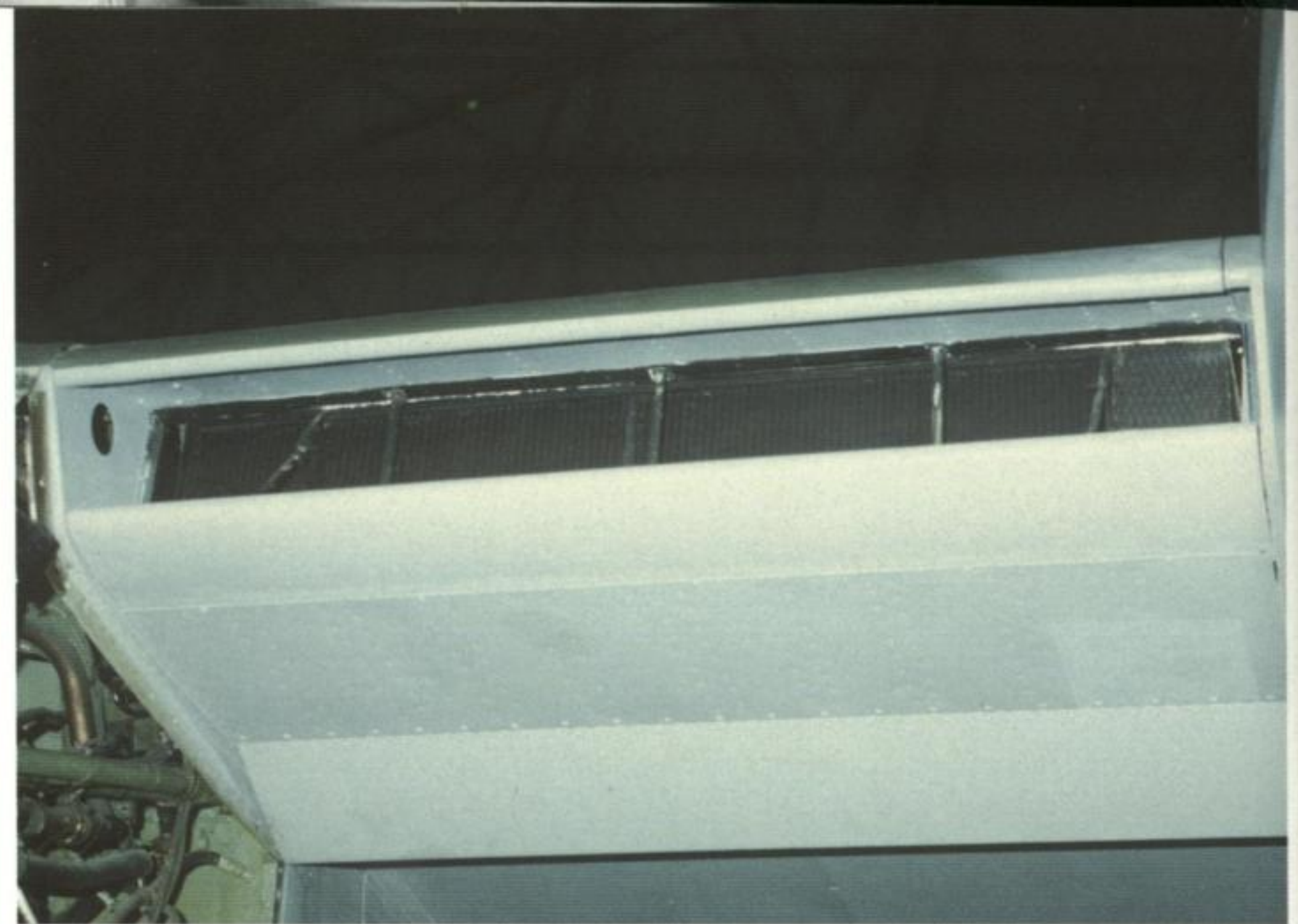
The Mosquito's landing flaps ran from the wing root to the aileron, but were split by the extended engine nacelle. The aft section of the nacelle housed the flap actuator and a torque tube linking the inner and outer flap sections. The flaps were constructed using wooden ribs skinned with plywood.

The flaps could be lowered from zero degrees to a maximum of 45° as well as any intermediate position. The flaps were set to zero degrees for taxiing, 15°-25° for takeoff, and 45° for landing. The flaps were usually up when the aircraft was parked since retracting the flaps was part of the pilot's shut down checklist..





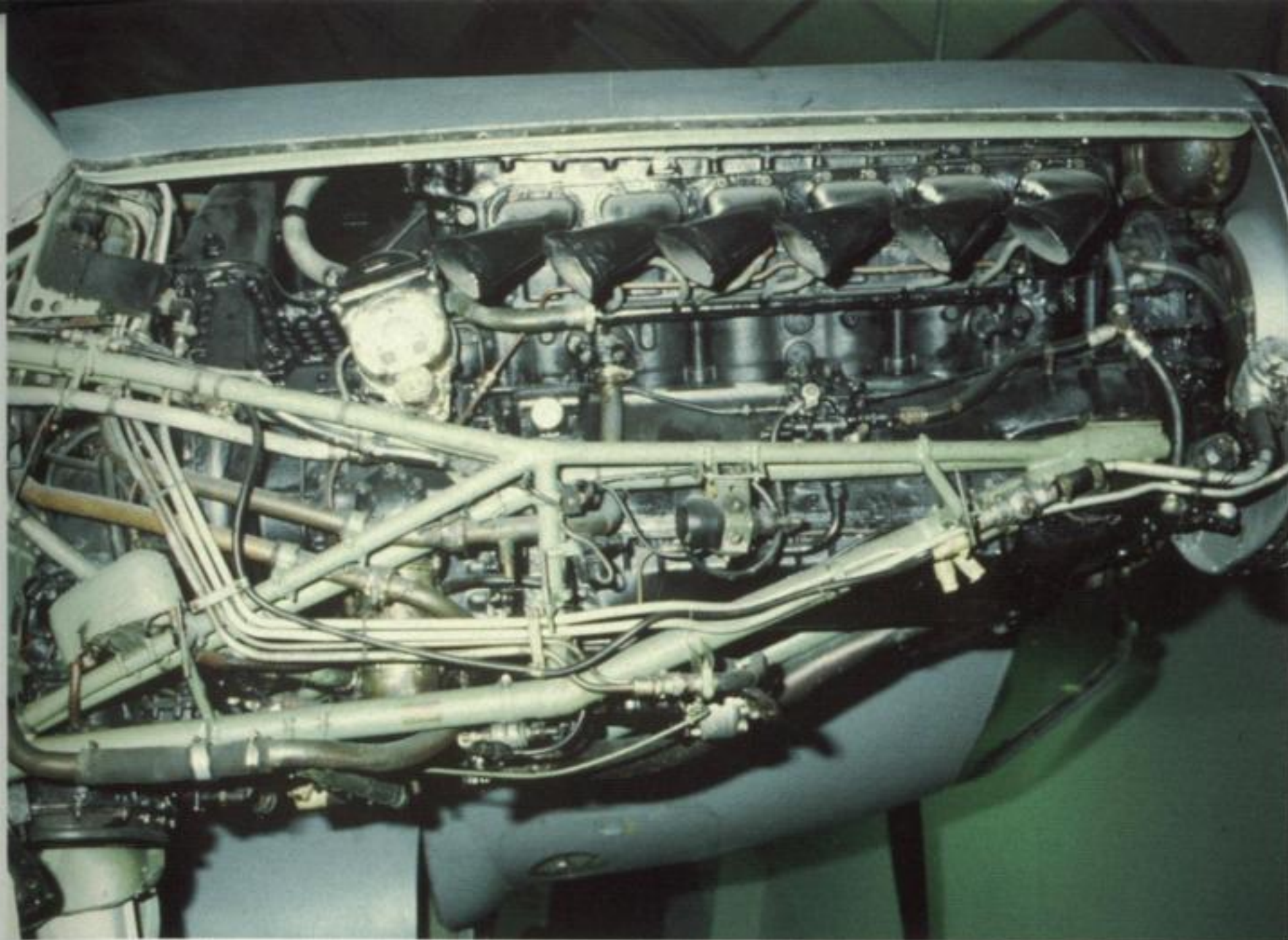
Later variants of the Mosquito — such as this B Mk 35 — were fitted with uprated Merlin engines equipped with a two-stage supercharger. These engines required a revised cowl-
ing with an intercooler scoop located below the propeller spinner and an elongated carburetor air scoop. The cowl panels were metal and removable for maintenance.



Each engine had a radiator mounted in the leading edge of the inner wing section. The radiator was flanked by an oil cooler on the outside and a cabin heater core on the inside. The air flow was controlled via the moveable flap on the under wing surface behind the radiator.

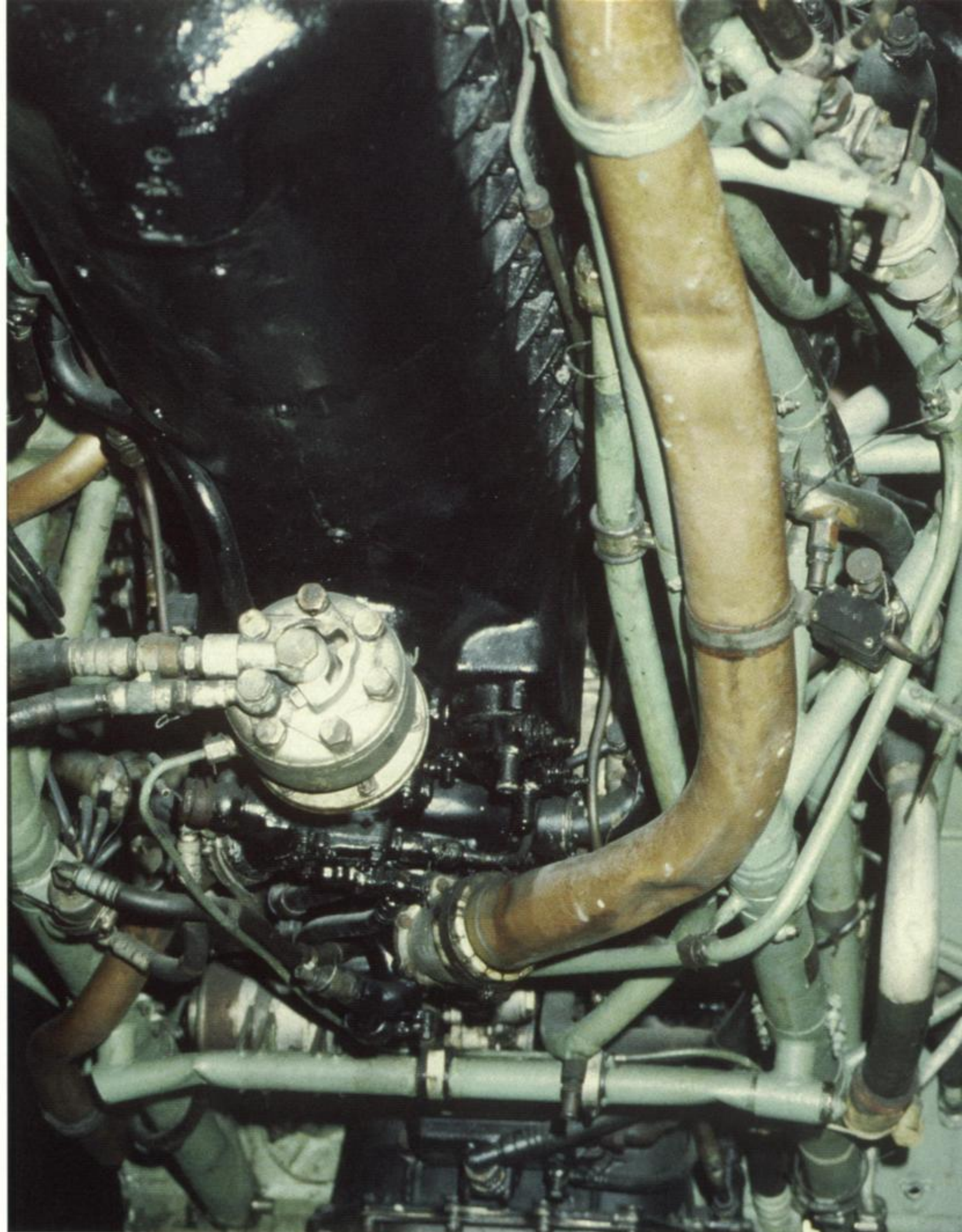
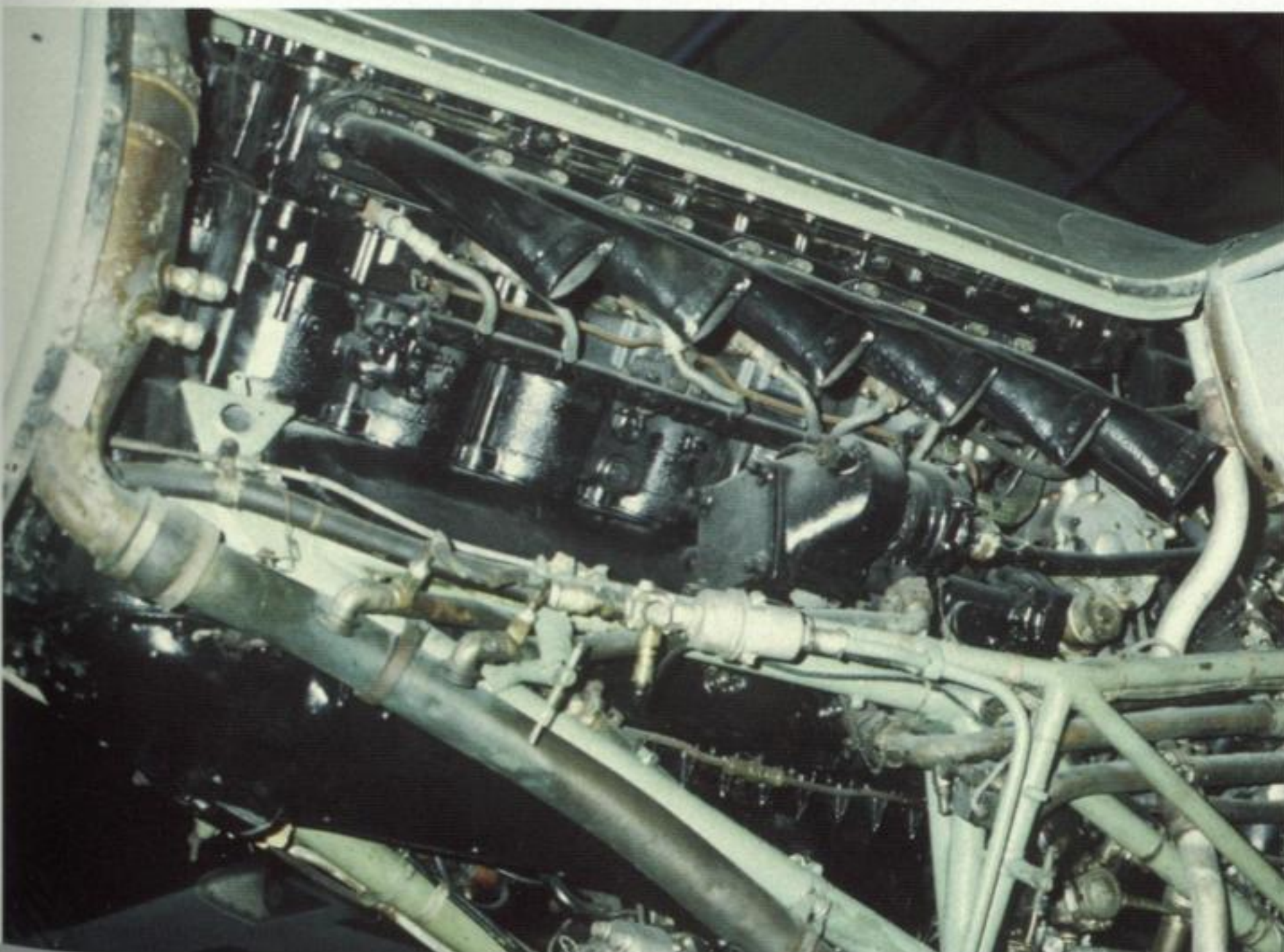
Wing Radiator, Oil Cooler, and Cabin Heater (Starboard Wing Shown)





The Mosquito B 35 was powered by two 12 cylinder, 1710 horsepower, Rolls-Royce Merlin 114 supercharged engines. The engines provided the aircraft with a top speed of 415 mph at 42,000 feet. This is the starboard side of the number two (starboard) engine.

The port side of the same engine above reveals the large diameter coolant pipe leading from the coolant header tank at left down to the engine driven coolant circulating pump beneath the rear of the engine. The magneto cooling pipe is sandwiched between the rear exhaust stub and the radiator.

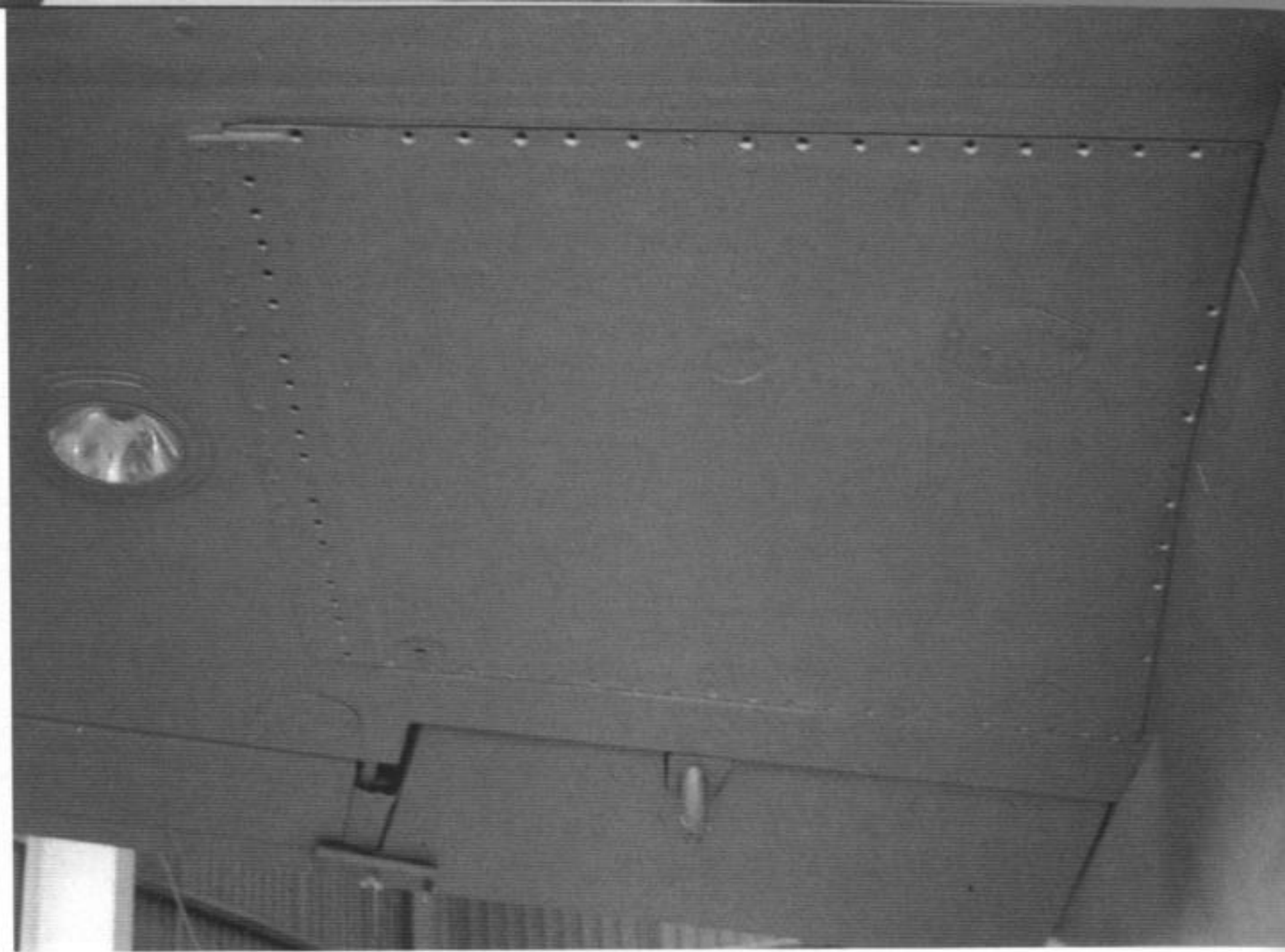


The coolant pipe leading from the header tank to the pump is fastened to the lower engine bearer with two clips. The silver unit beneath the engine is the hydraulic pump.



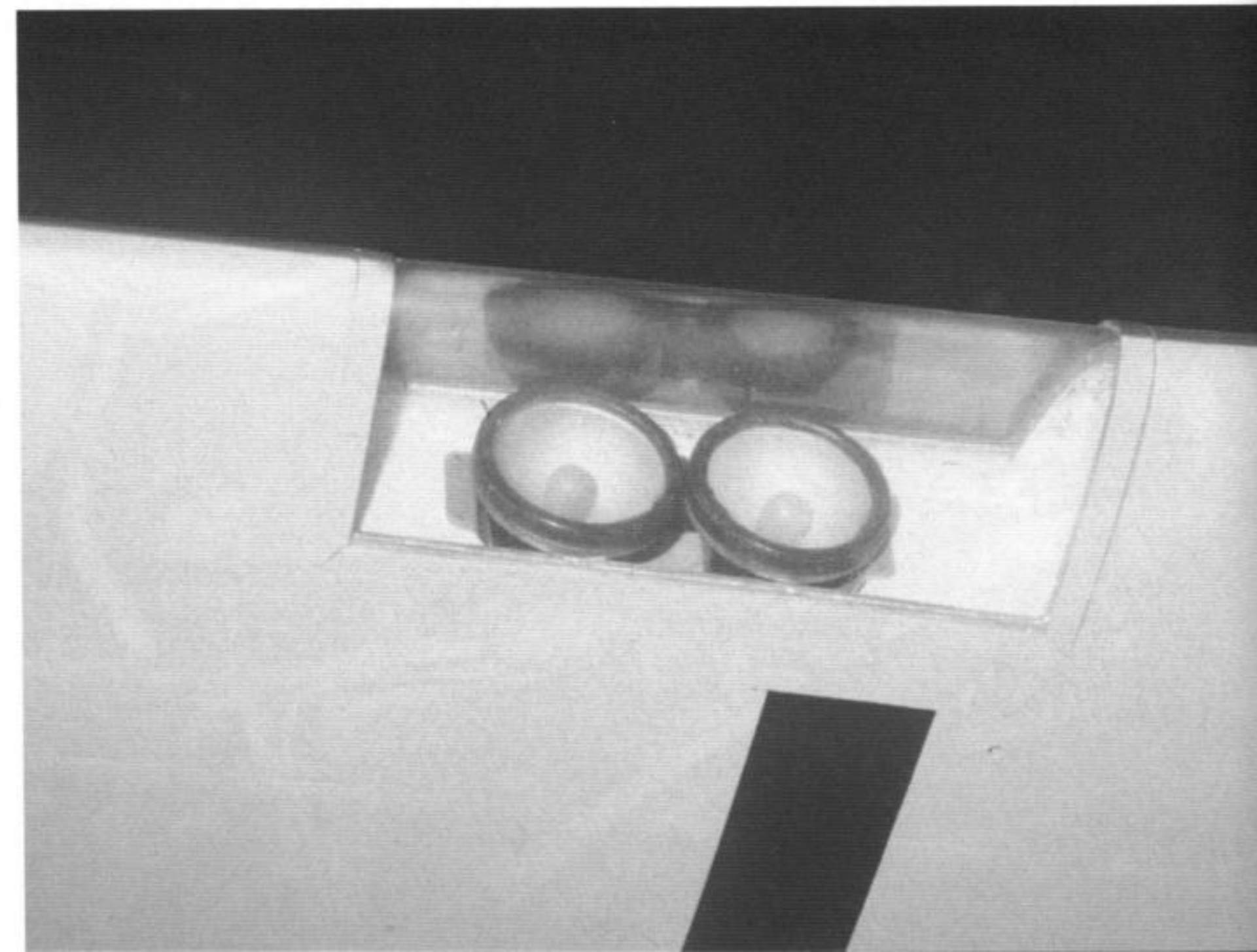
Merlin engines with two-stage superchargers had an extra air scoop located under the spinner. The scoop fed air into the supercharger intercooler. Behind the scoop is the intercooler's louvered outlet port. Below the intercooler outlet is the carburetor air scoop. An ice guard is fitted over the mouth of the scoop, but these were not always fitted.

Two removable panels provided access to the flap actuator and the torque tube linking the inner and outer flap sections. The spanwise raised strip in front of the flap access panel covers the rear wing spar.



The fuel tanks on either side of the engine nacelles were covered by removable access panels under the wing. These panels formed part of the wing's stressed skin. Each wing was equipped with a flip down landing light.

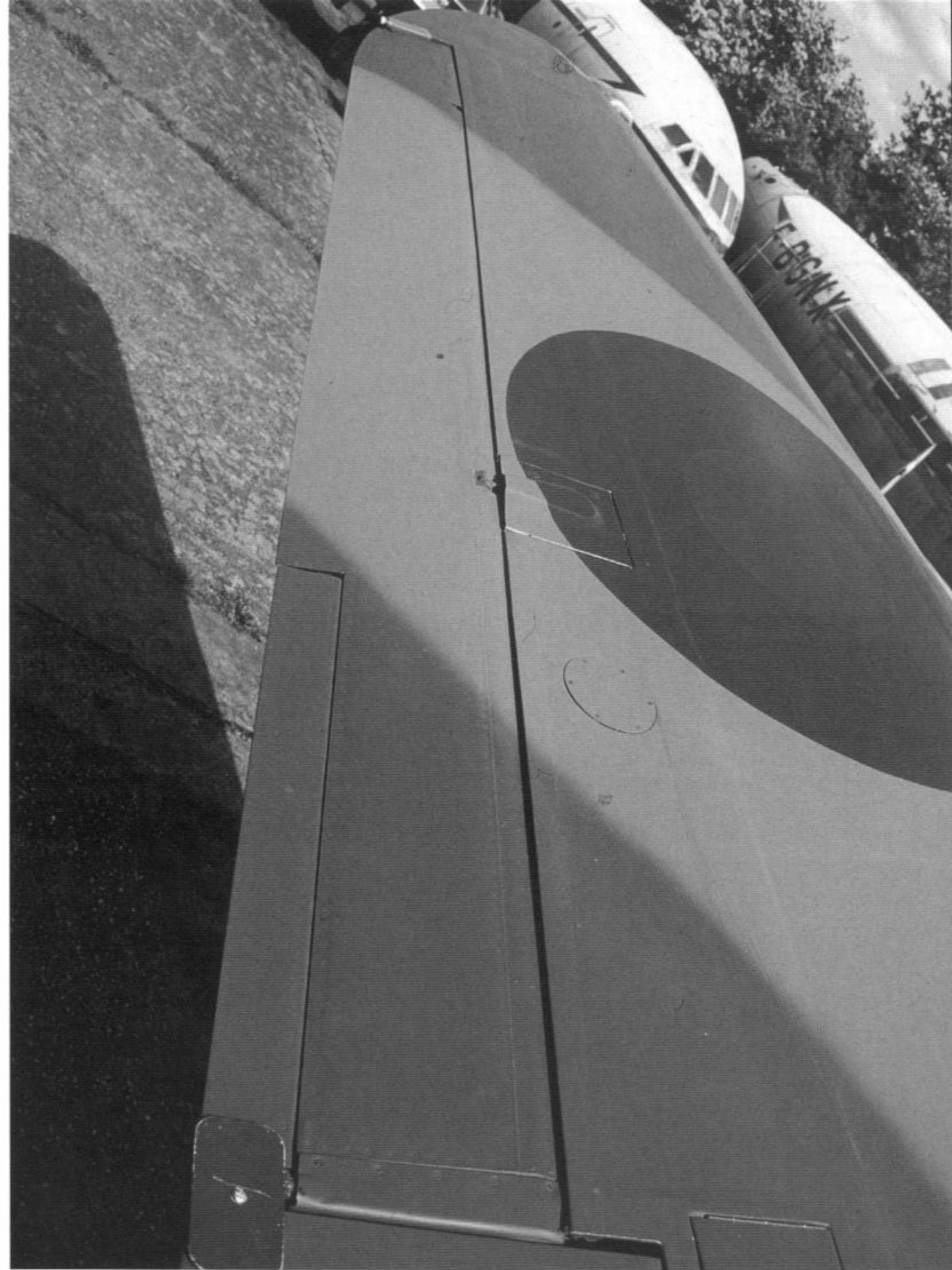
Many later Mosquito variants had an additional pair of landing/taxi lights mounted in the starboard wing leading edge and covered by a single piece of curved perspex. These are also believed to have been used as an identification light to friendly aircraft.



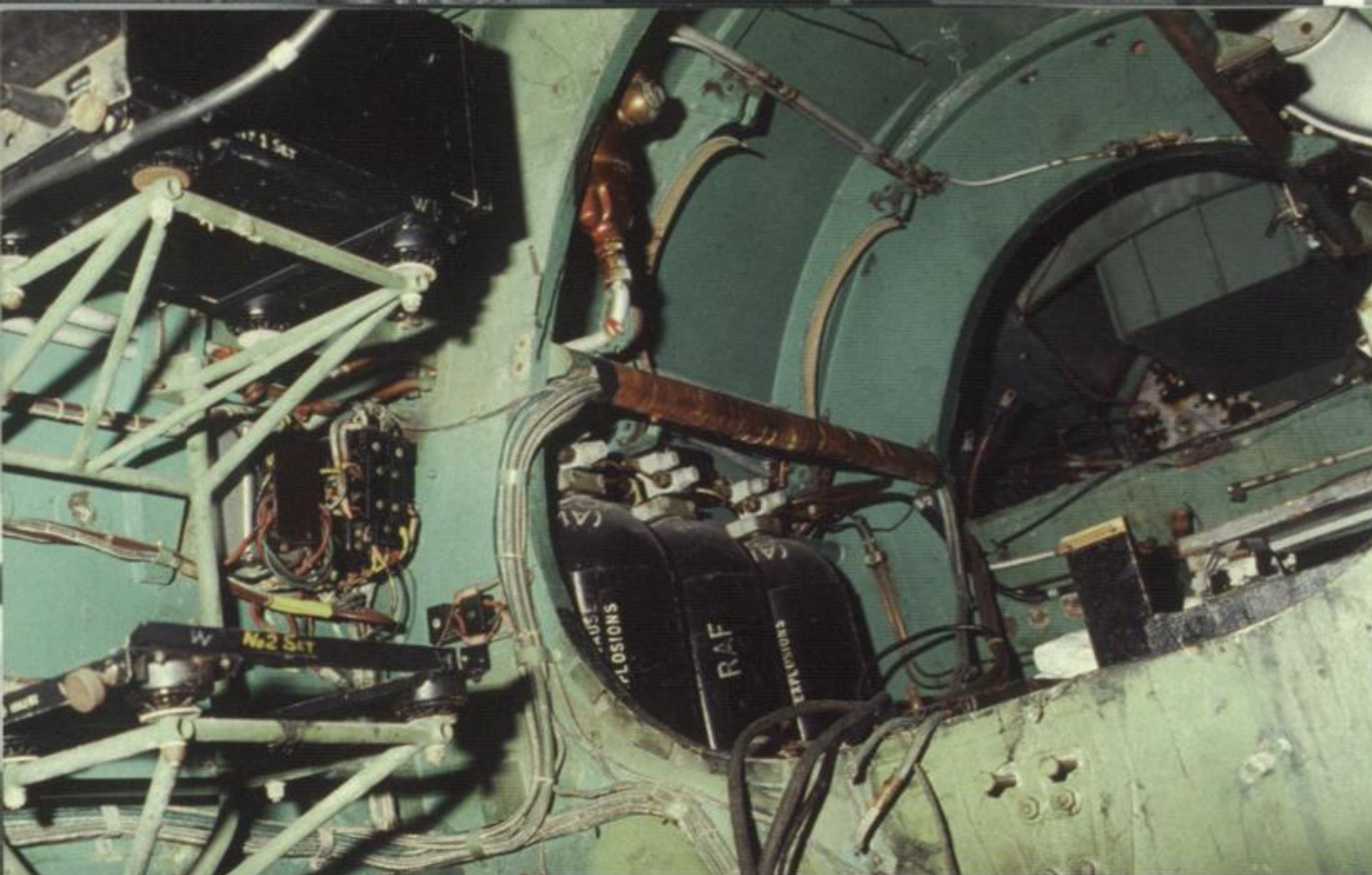


A small formation light was mounted on the inner wing tip trailing edge. Light was emitted through small slots and was only visible from behind the aircraft.

The leading edge of each wing tip was fitted with a clear perspex cover. Inside the cover was a colored navigation light — red to port and blue-green to starboard. The colored bulbs were accessed via the rectangular cover immediately adjacent to the clear cover. Some Mosquito variants had a second pair of lights mounted in the wing tip trailing edge.

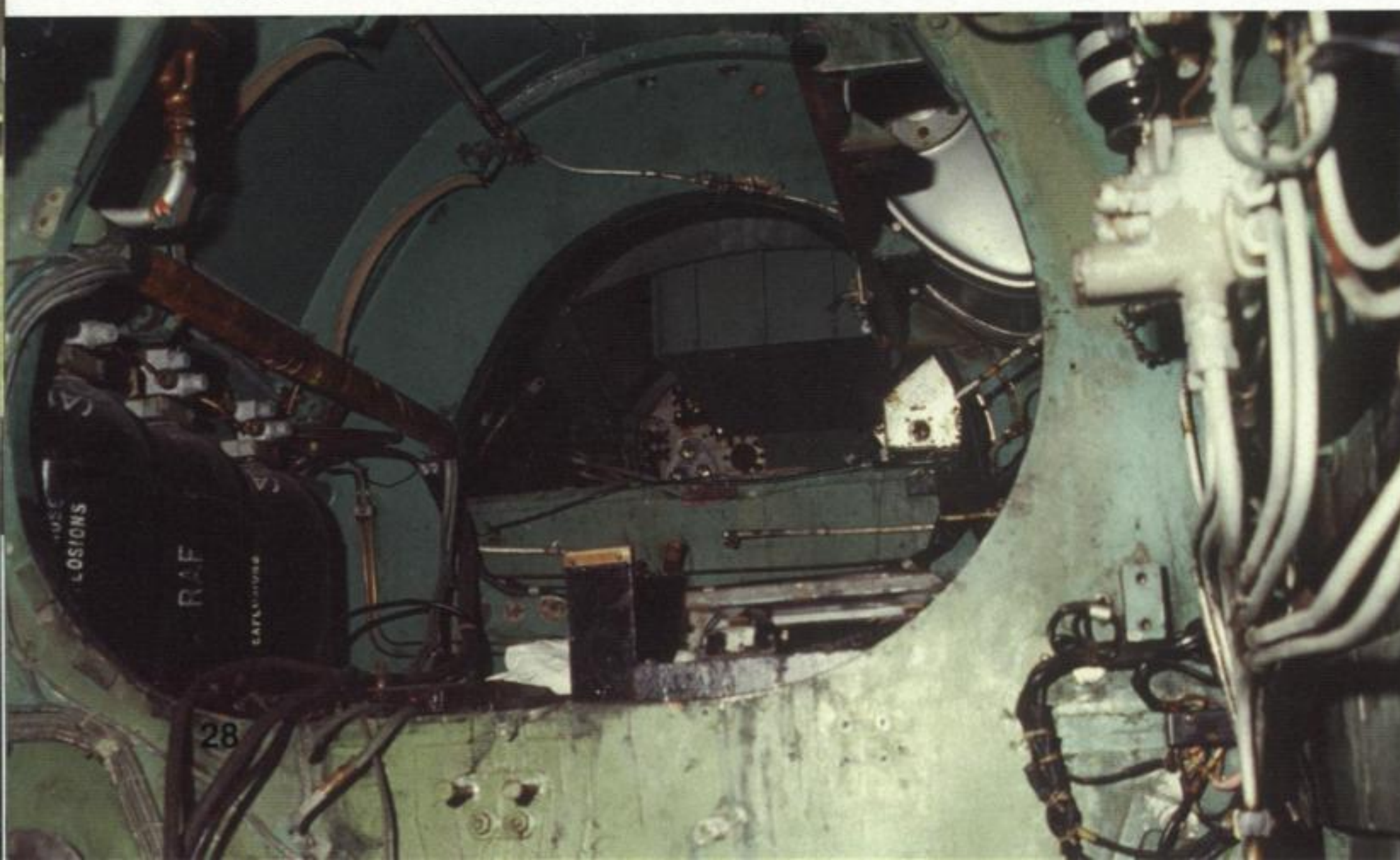


Both all-metal ailerons were equipped with a trim tab set into the inner trailing edge. The port aileron trim tab also served as a balance tab.



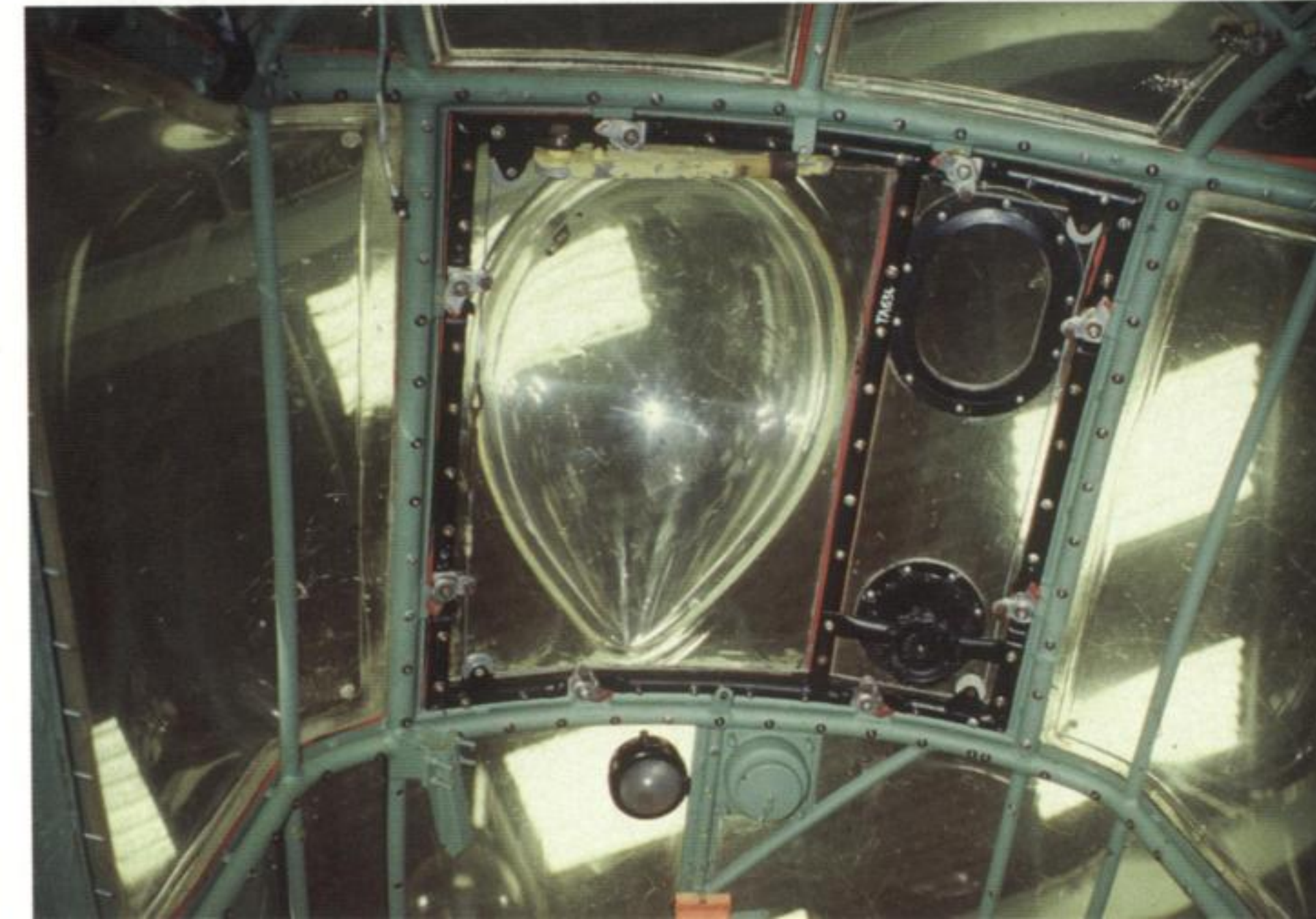
Looking forward from the starboard aft fuselage hatch reveals the radio mounting trays on the port side of the fuselage behind the number four bulkhead. Further forward are the compressed air cylinders. The interior fuselage was painted overall interior grey-green.

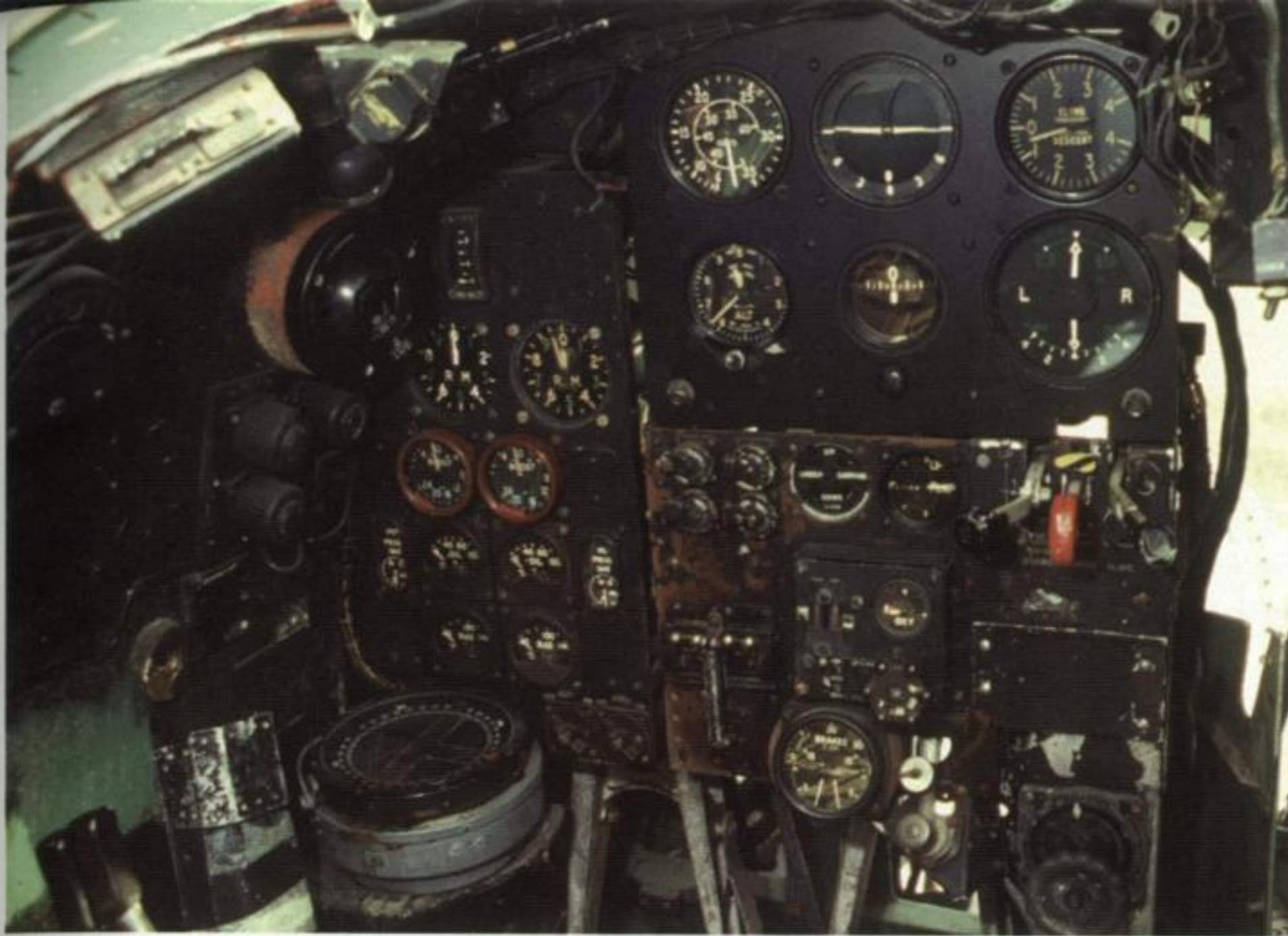
A silver hydraulic reservoir tank was mounted opposite the compressed air cylinders on the starboard side. Forward is the number three bulkhead and the rear wing spar. The dinghy box is hanging down from the top of the fuselage above the wing spar.



Mosquito bomber and PR variants were equipped with a downward hinging crew access door under the starboard side of the nose. The door could be jettisoned in flight by depressing the pedal at the top. The circular viewport allowed the use of a drift sight for navigation purposes.

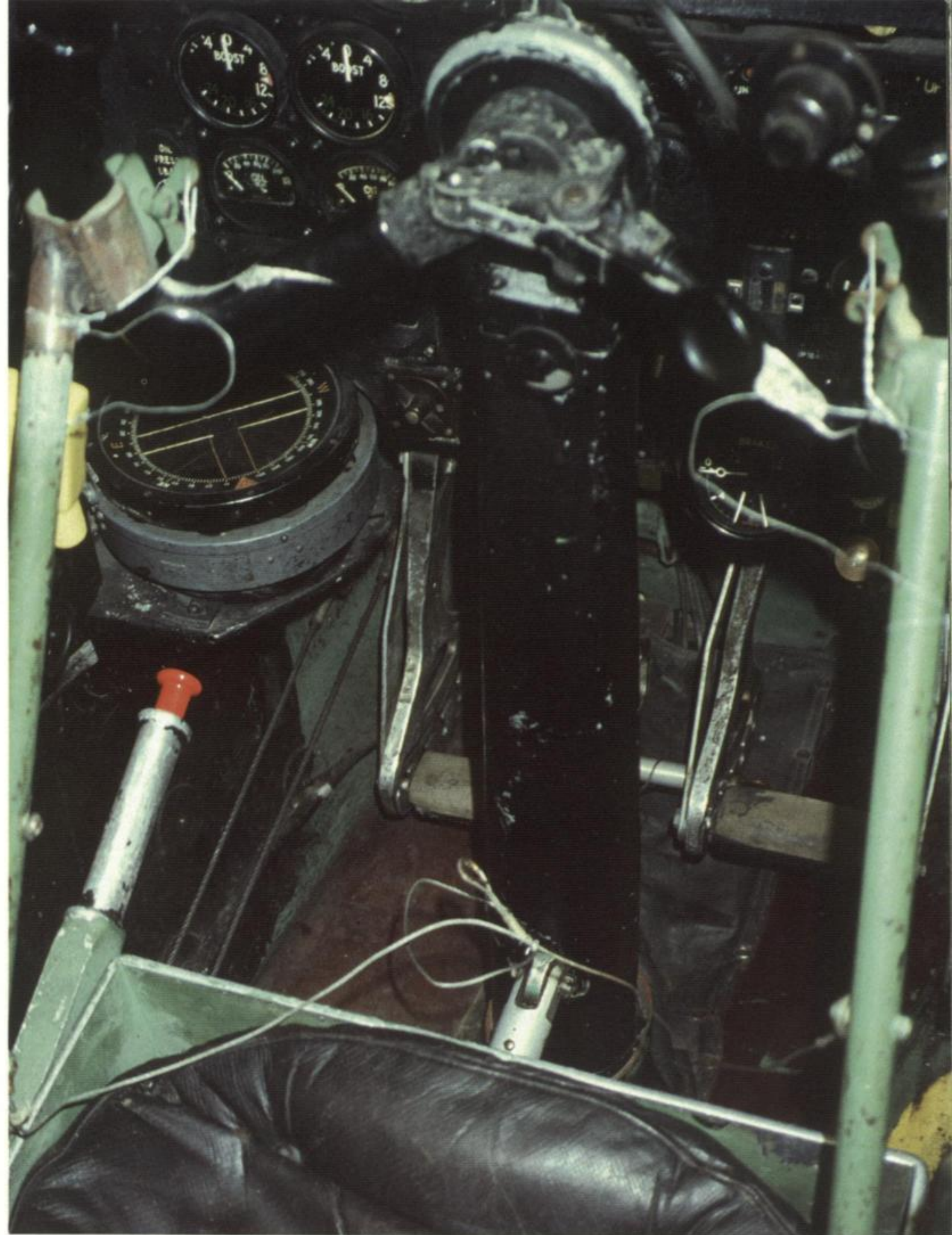
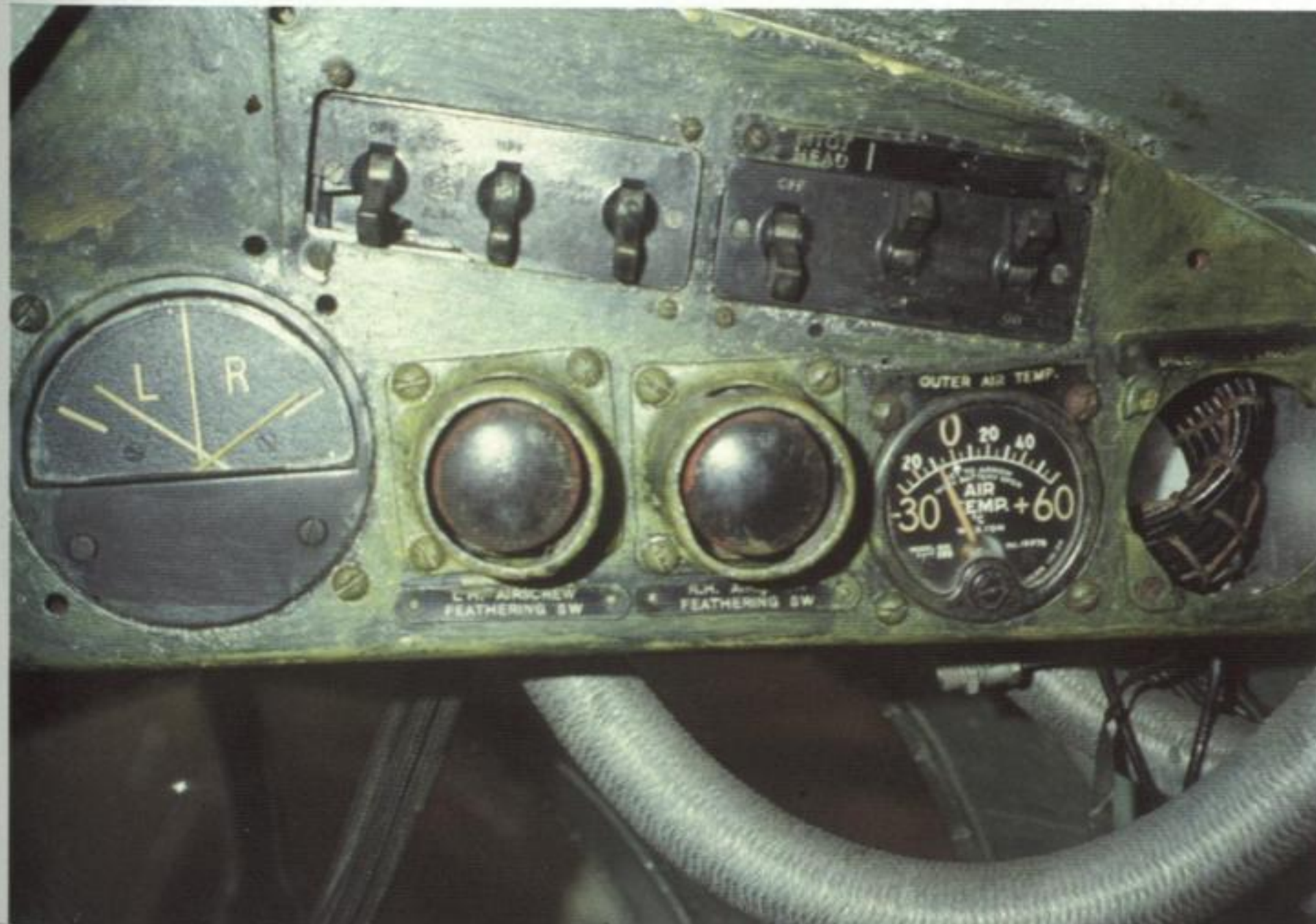
Looking up through the entry hatch reveals the tubular metal structure of the canopy. Mosquito canopies were equipped with a variety of flat, bulged, and/or blistered side panels. Many PR variants were also equipped with a blistered panel in the upper escape hatch. The oval panel is a 'knock-in' plug to allow outside rescuers access to the yellow hatch release lever. The hatch release was normally painted red. The black knurled wheel operated an air vent.



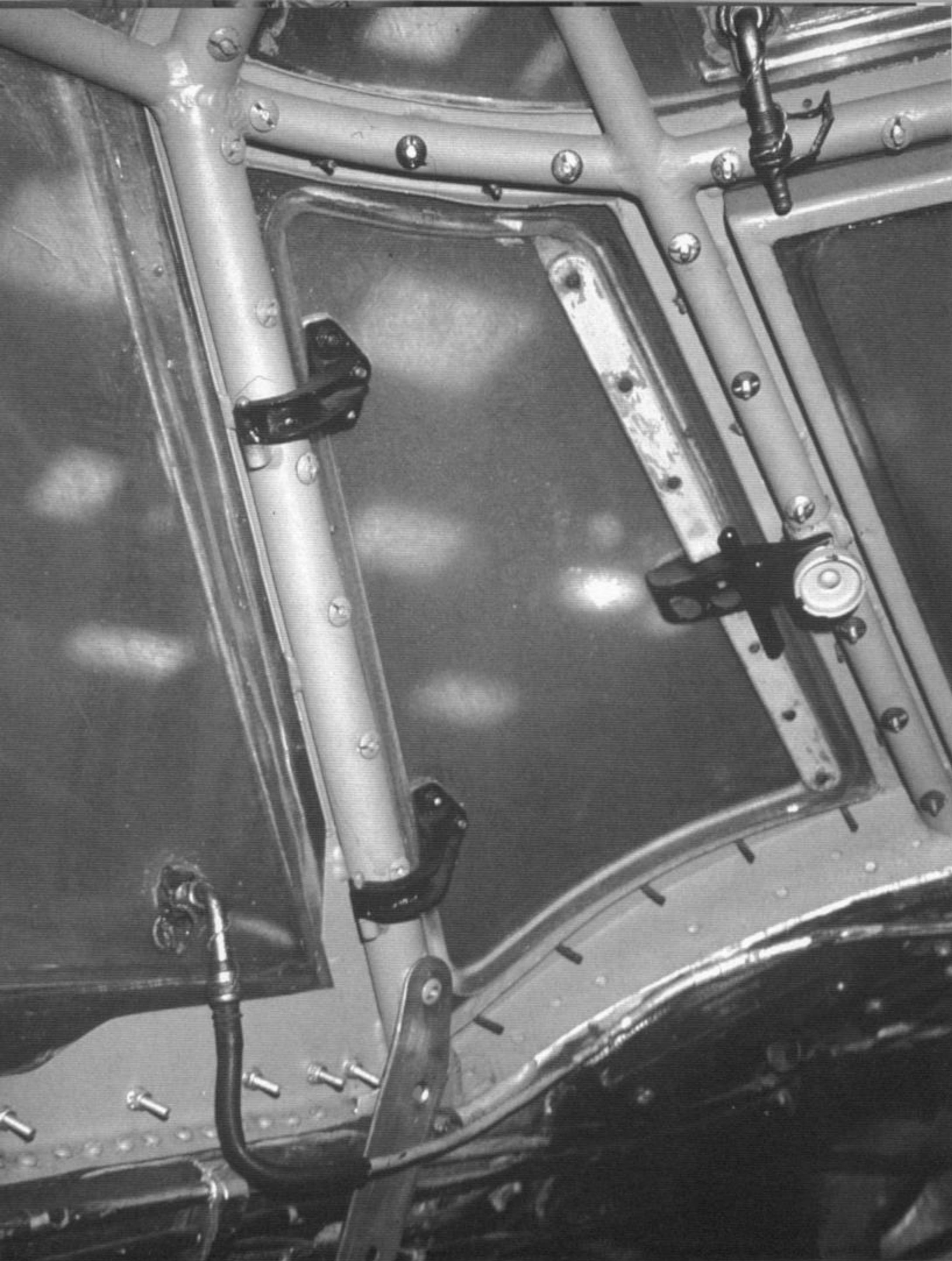


The main instrument panel was located on the port side of the cockpit and contained all of the primary flying, navigation, and engine instruments. The red knobbed lever at right operated the landing gear. The levers to its left and right respectively operate the bomb bay doors and flaps. The compass binnacle is at lower left.

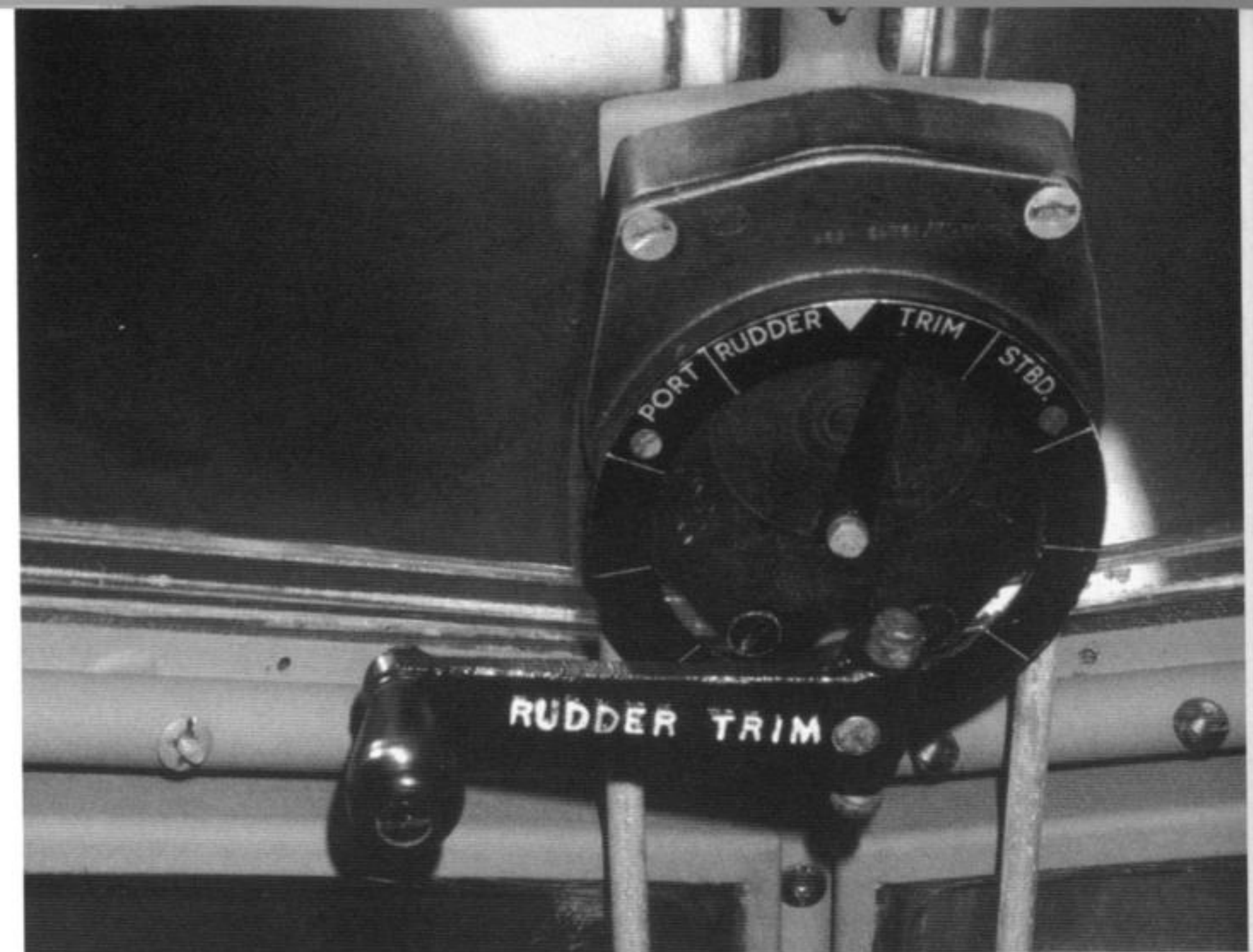
A subpanel is located above the passageway to the nose compartment immediately to the right of the main instrument panel. The subpanel contains the two propeller feathering buttons, electrical switches, and a drift meter for a ground position radio. The instrument and electrical panels were generally painted black.



Mosquito bomber and PR aircraft were equipped with a control column and wheel. The elevator control rod was attached to the base of the column. Two rods clipped to the seat locked the control column. The silver handle on the seat pan adjusts the seat's height.

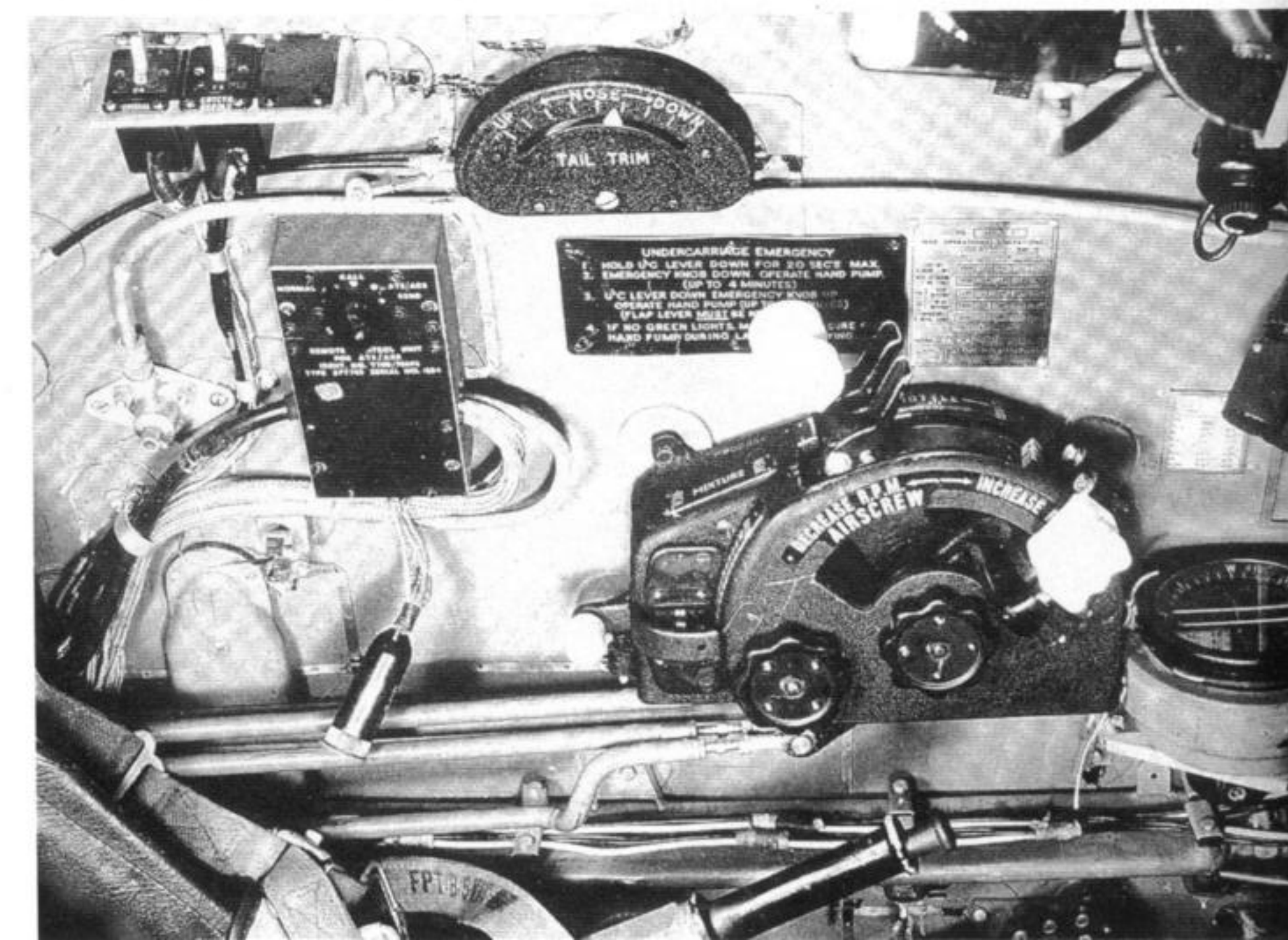


The left front windscreen quarter panel was hinged at the rear and swung back into the cockpit. This type of window was fitted to bomber and PR aircraft with pressurized cockpits. Non-pressurized aircraft used a sliding window.



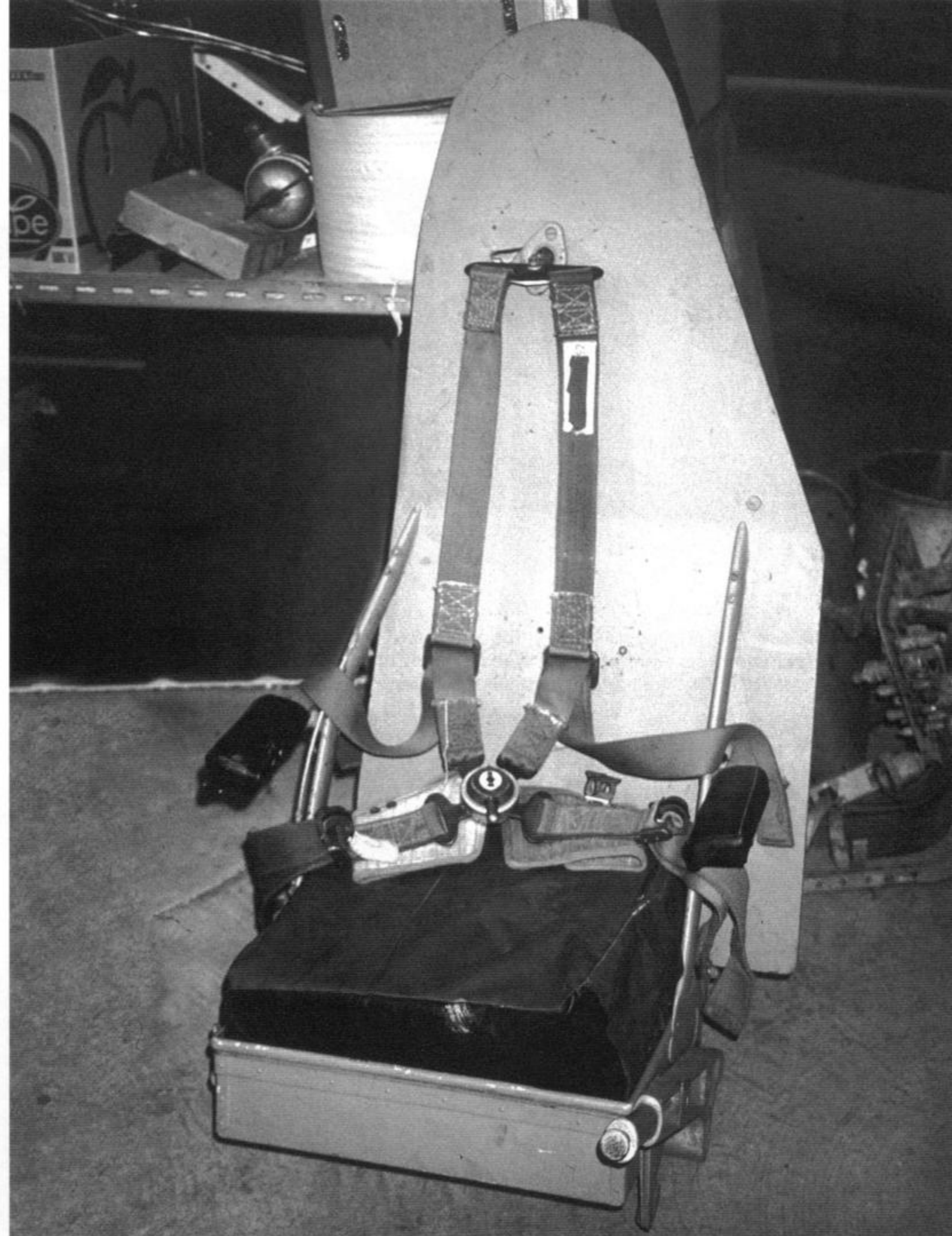
The windscreen framing served as a mount for the rudder trim knob on bomber and PR Mosquitos. The control cables extended downward through the instrument panel.

The engine control quadrant was mounted on the port cockpit sidewall and contained the throttles and propeller controls. The compass binnacle is directly in front of the throttle quadrant. Directly above the throttles is the elevator trim indicator dial. The cockpit sidewall is painted grey-green, while the throttle quadrant and other equipment are black.





The pilot's seat consisted of a formed metal seat pan attached to an armored back plate. The shoulder harness was attached to a ring which was secured to the top of the back plate.



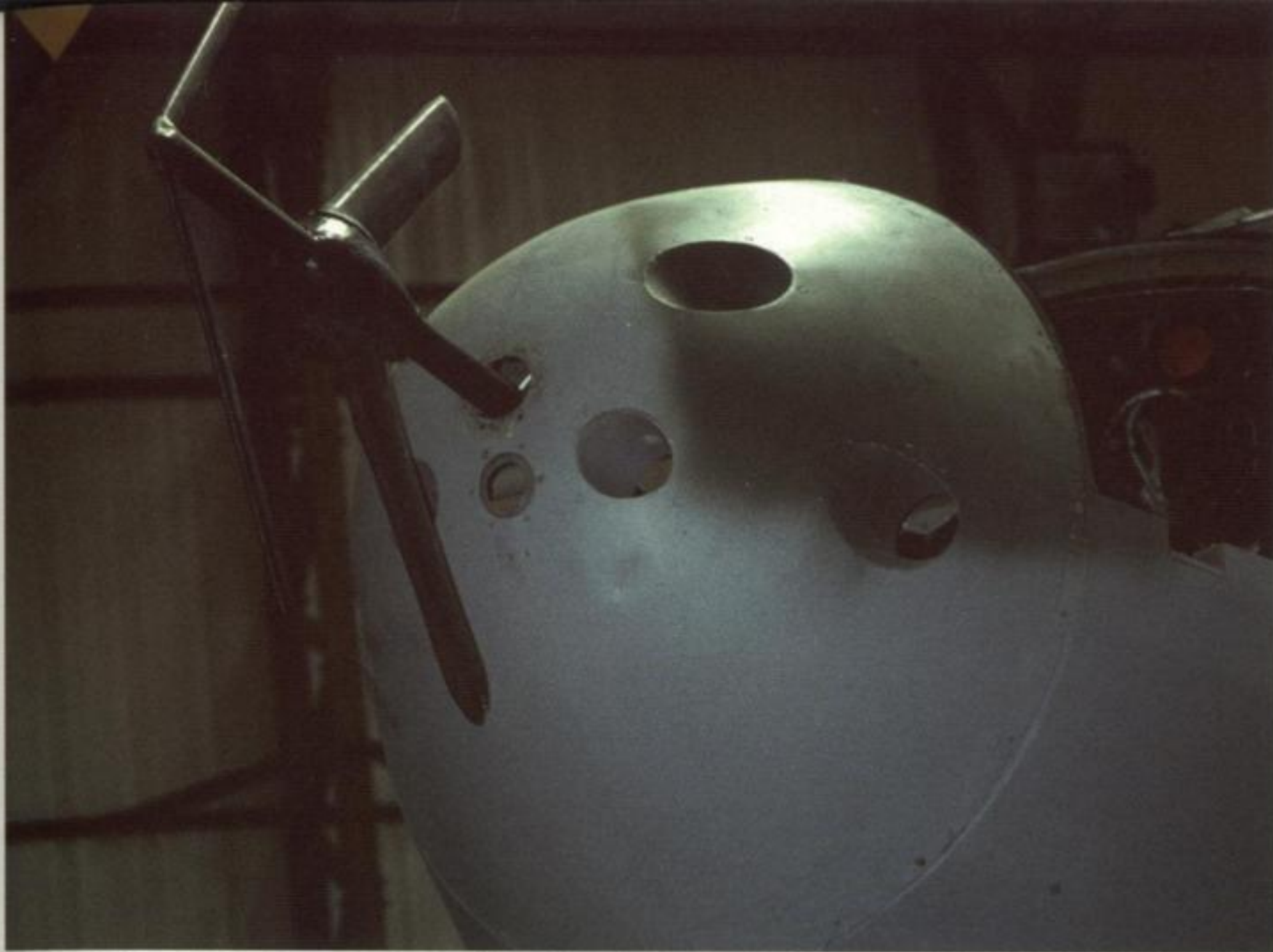
The seat was equipped with folding padded armrests. The back plate was asymmetrical to conform to the interior fuselage sides.



(Above) This Mosquito fighter at the Yorkshire Air Museum in England is a combination of parts from several Marks, but is being rebuilt to represent a Mosquito NF II Night Fighter — the first night fighter variant to see operational service.

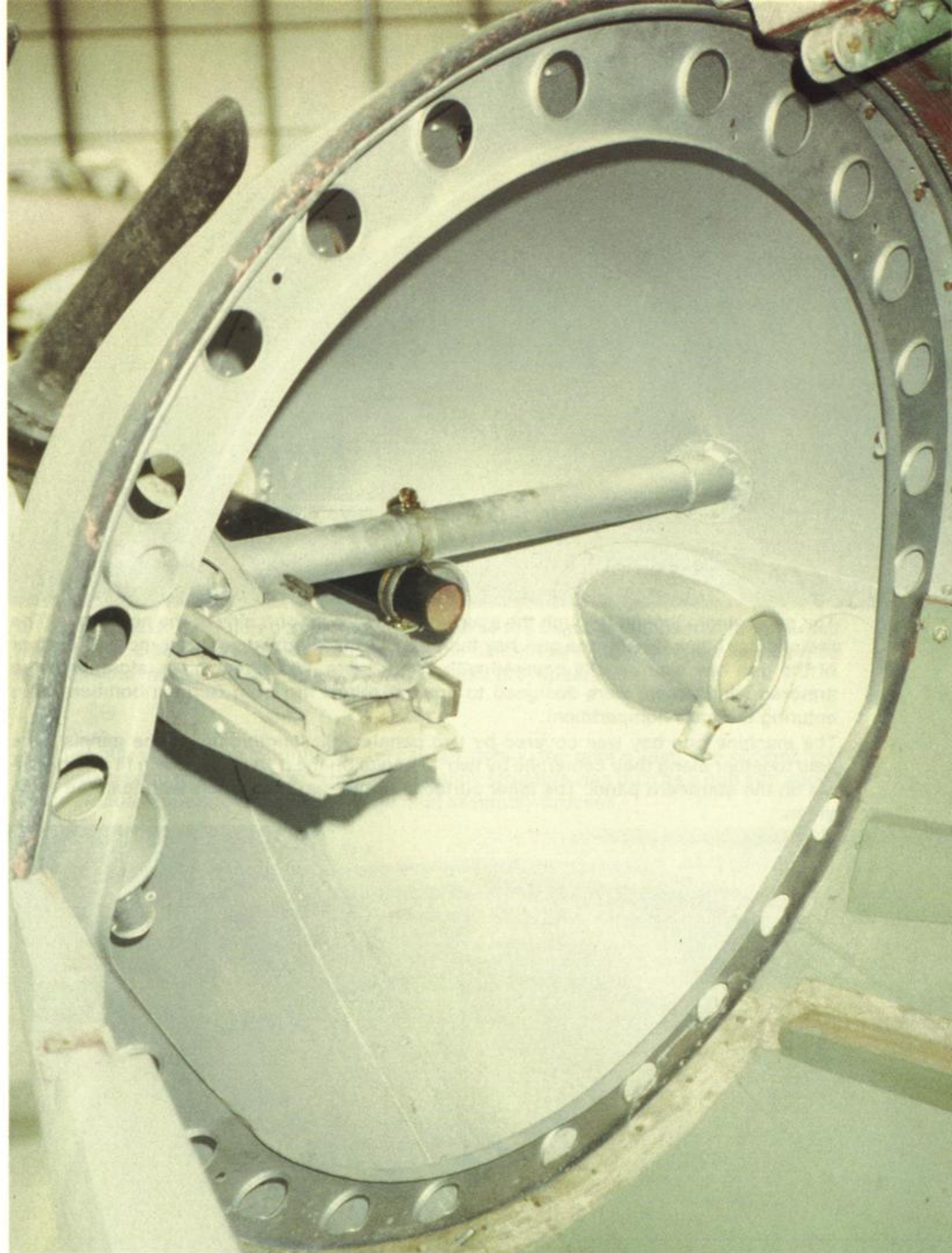
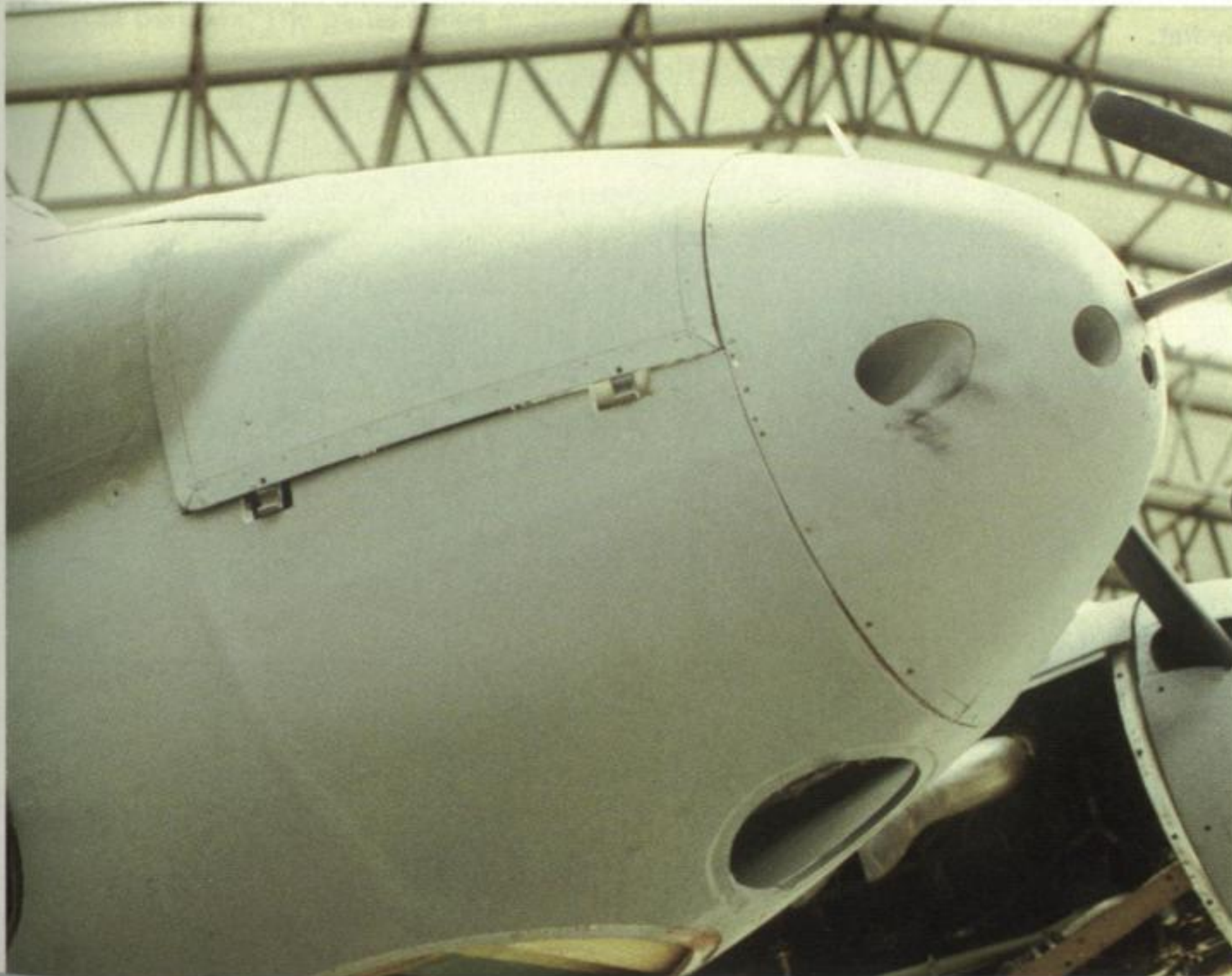
(Below) The aircraft is complete except for bomb doors and the wing area between the fuselage and the engine nacelles. This Mosquito is also equipped with the needle-style propeller blades common to all early Mosquito variants.



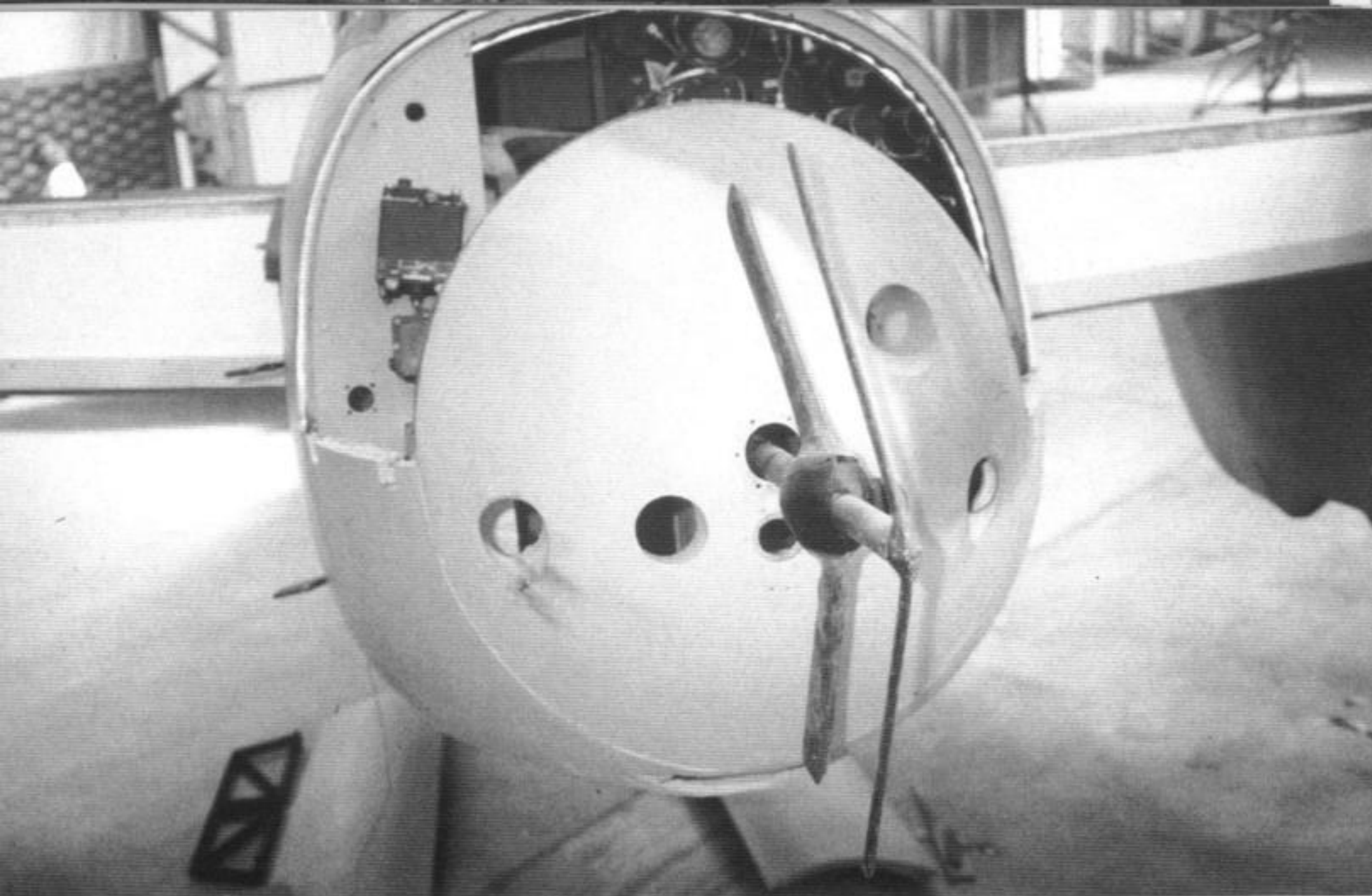


The Airborne Interception (AI) Mk IV radar equipment used an arrow shaped transmitter antenna mounted in the extreme nose of the aircraft, while the receiver antennas were mounted above and below the wing tips. Four .303 caliber machine gun barrels protruded through the holes below the radar antenna.

The gun bay was covered by a pair of removable hatches split port and starboard. The inner surfaces of the gun bay were painted grey-green (FS 34226).

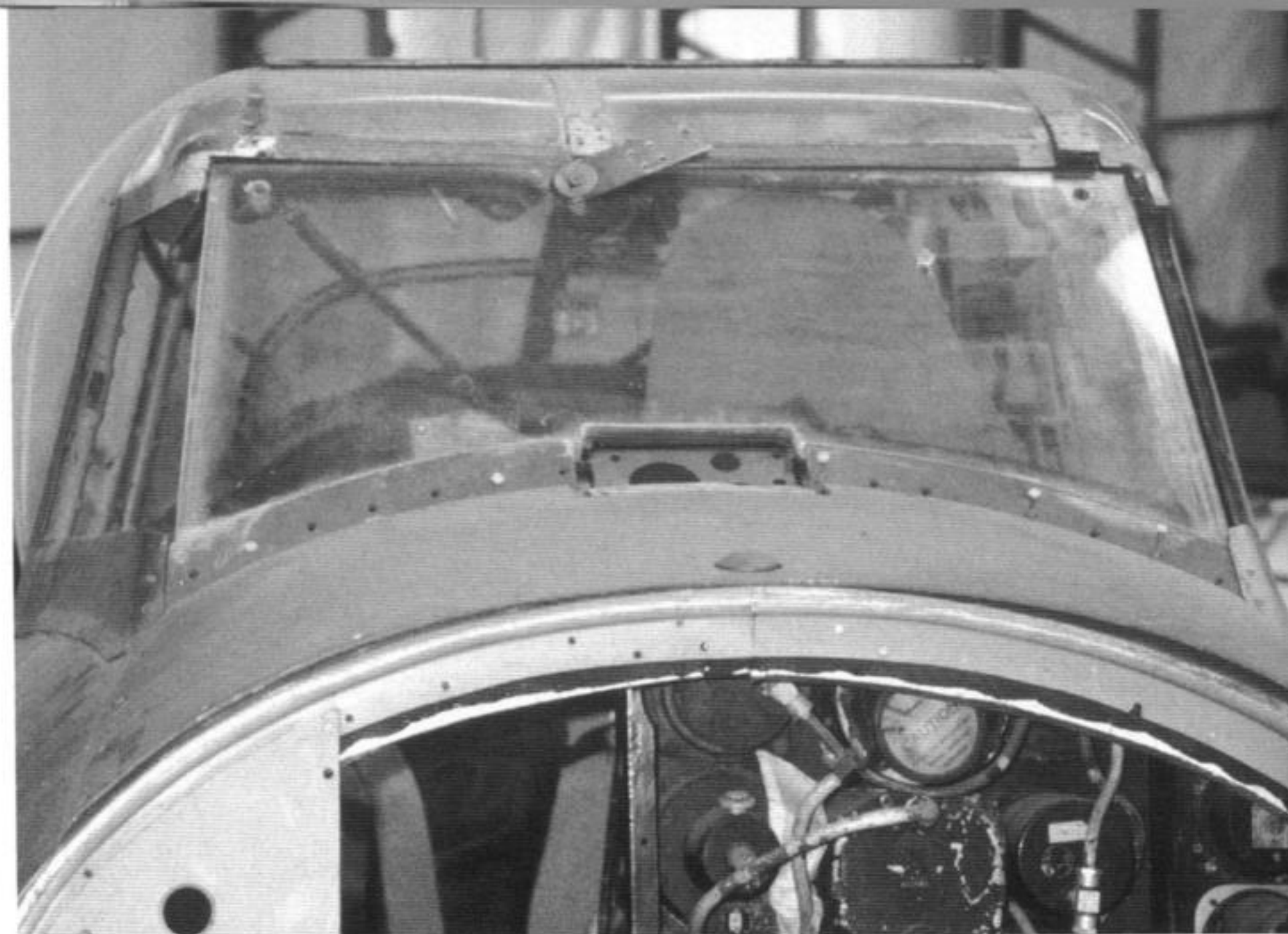
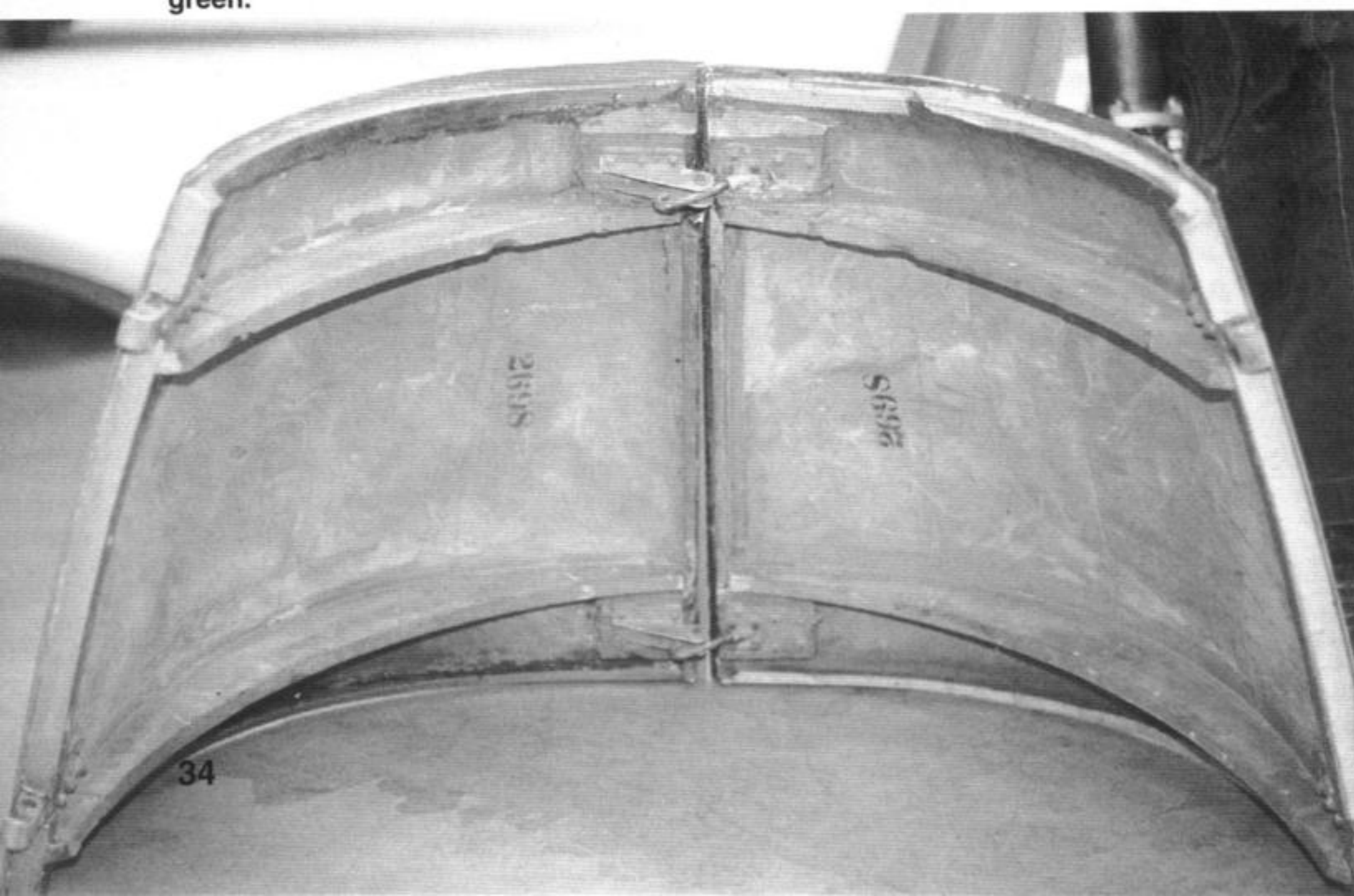


The inside of the nose cone contained integral fairings for the machine gun barrels and a rack for a G42 or G45 gun camera. The gun camera looked out an aperture above and between the two left most machine guns.



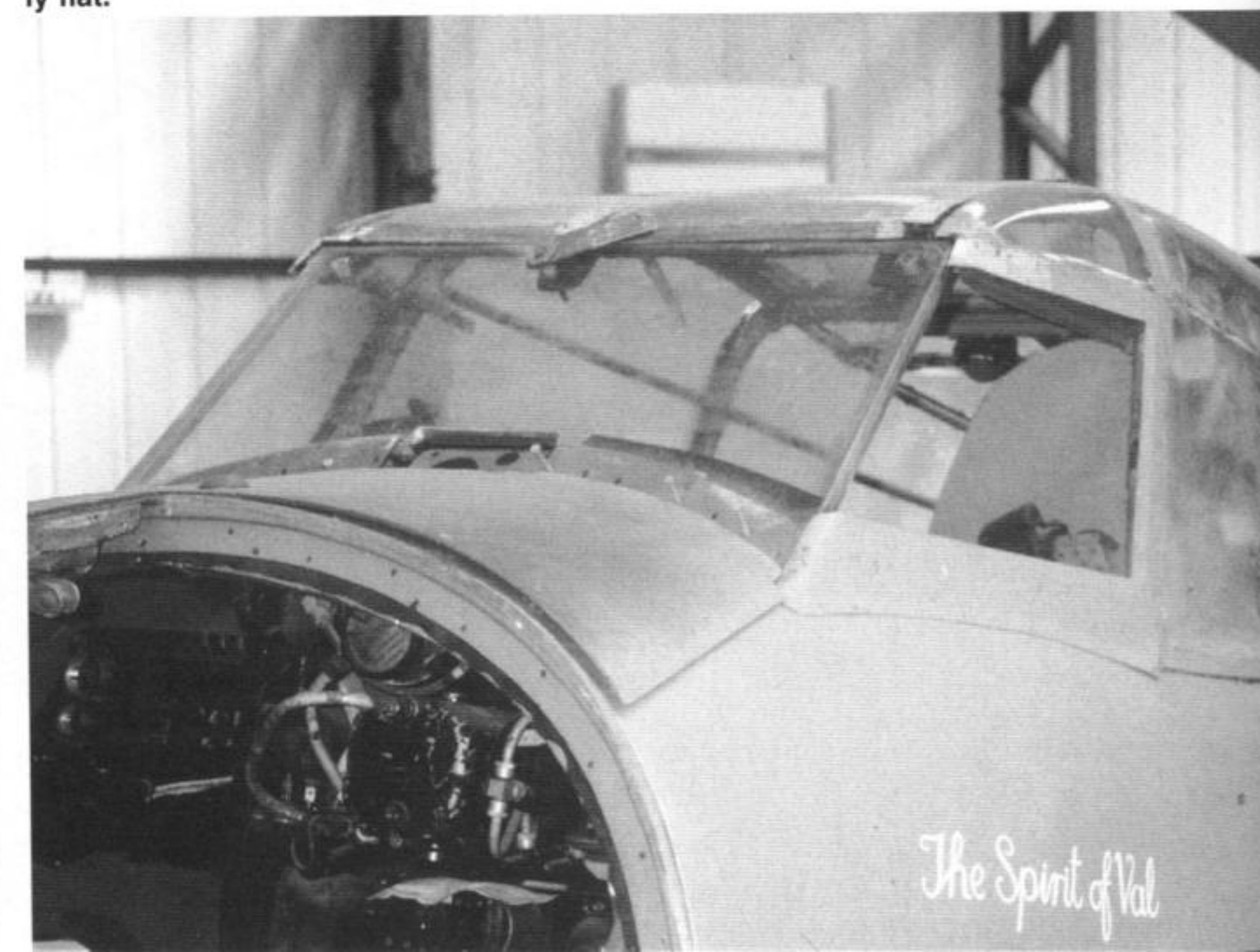
The gun camera looked through the aperture in the upper port side of the nose cone. The rectangular black box on the gun bay bulkhead is the windscreen wiper motor. The rear of the gun bay was usually covered with armor plate. The armor plate, along with the armored windscreen, were designed to prevent return fire from German bombers from entering the crew compartment.

The machine gun bay was covered by two panels split longitudinally. The panels were held together along their centerline by two 'J' hooks on the port panel which fit into brackets on the starboard panel. The inner surfaces of the gun bay panels were painted grey-green.



All Mosquito fighter and fighter-bomber variants were fitted with a single piece flat windscreen made from bullet proof glass. A steel bullet deflector strip ran along the base of the windscreen. The open rectangular bracket at the base of the windscreen housed a single windscreen wiper blade.

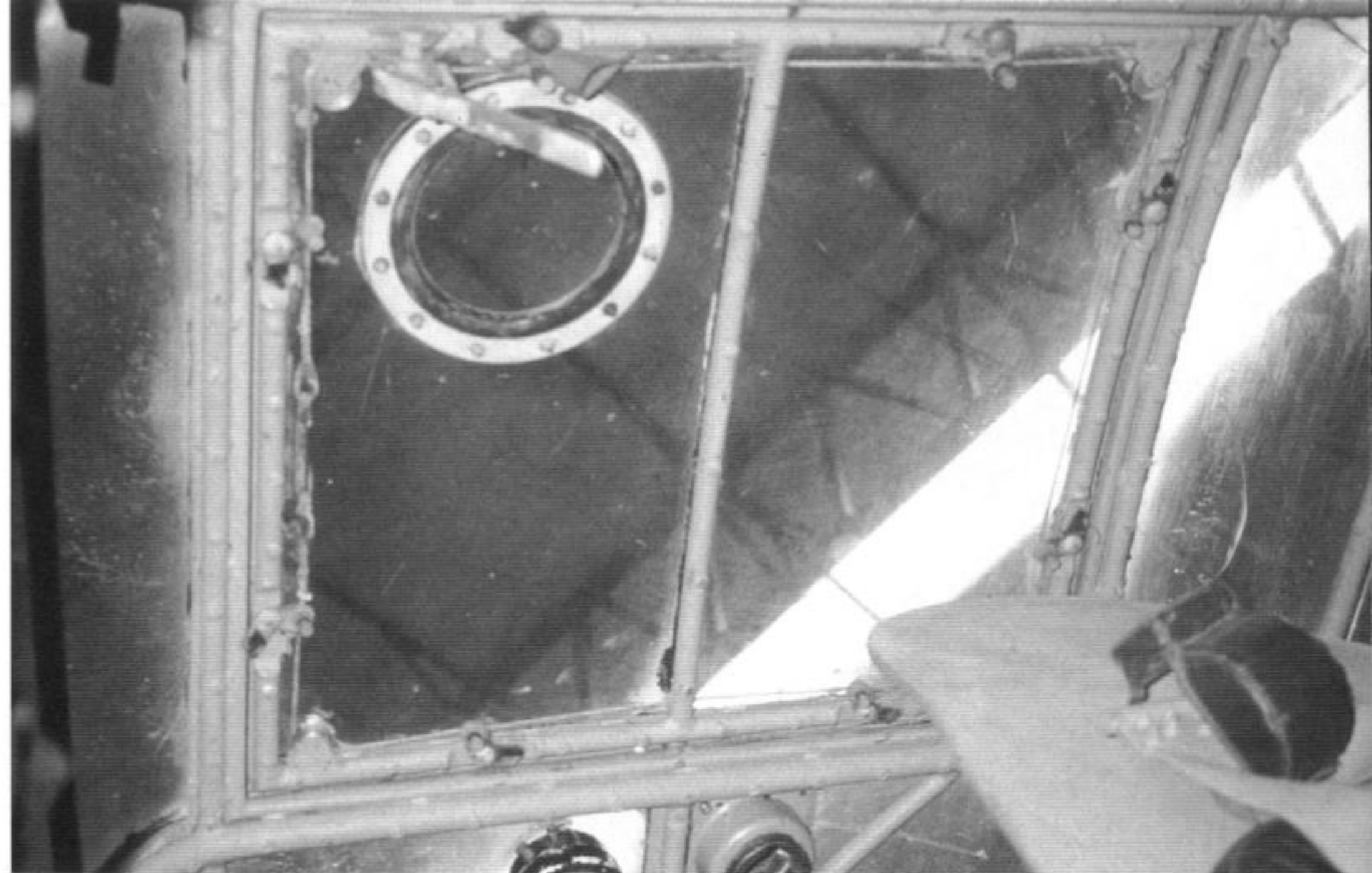
The Mosquito fighter canopy structure was generally identical to that of the bomber variants apart from the flat windscreen. The welded tube frames were covered with perspex and bolted and screwed to the fuselage. The perspex side panels on fighters were usually flat.





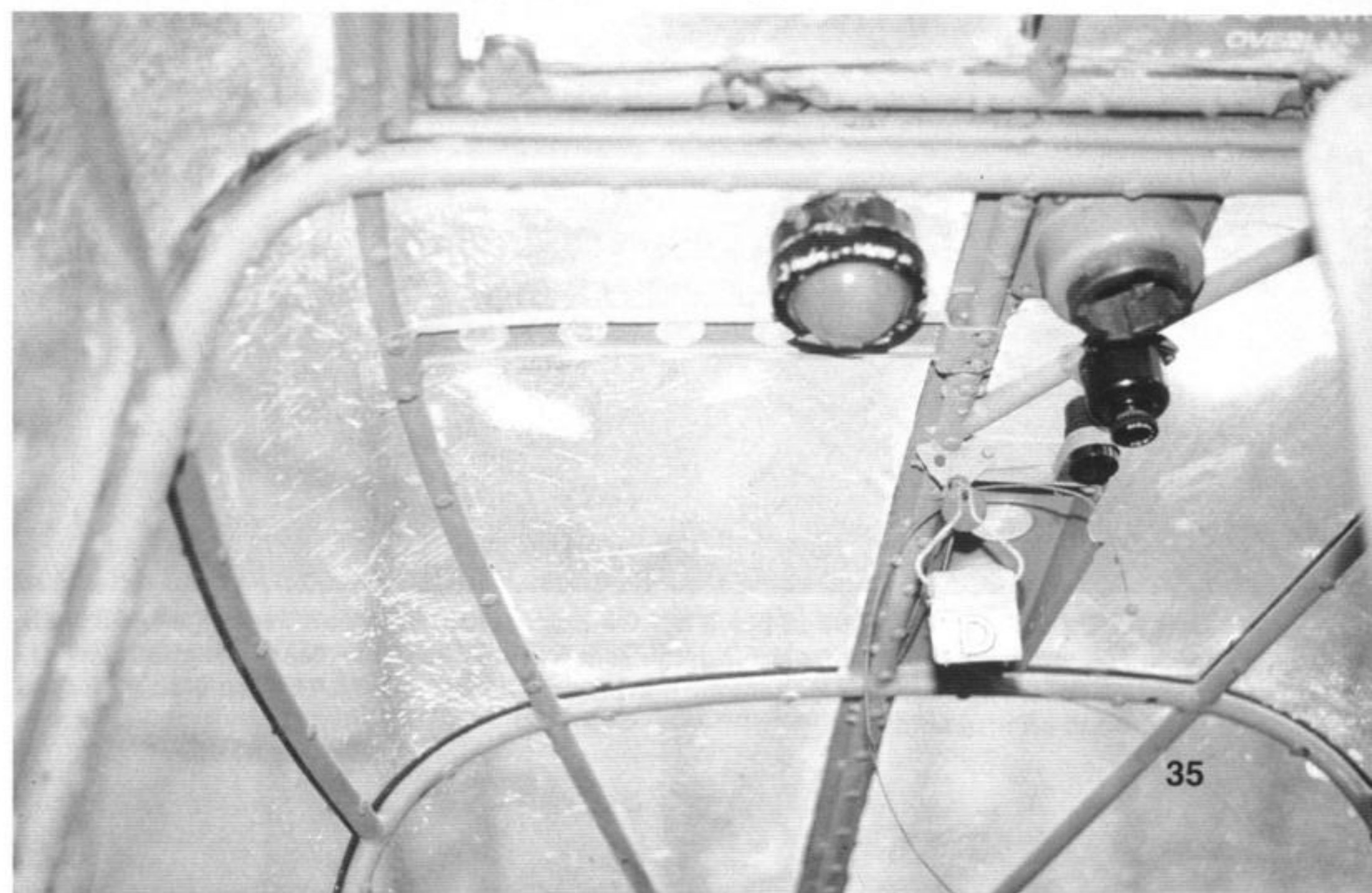
The tubular canopy frame was covered by formed perspex. A single flat framing strip ran along the center line up to the upper escape hatch. Additional flat strips were added to the sides and the windscreen. A signal flare port was located on the port side of the framing strip just behind the hatch.

Mosquito fighter variants had heavy side window frames enclosing a rearward sliding sheet of perspex. The panel slides in the grooved channel in the upper frame.



An escape hatch is centered in the upper section of the canopy. The handle at upper left released the catches around the periphery of the hatch. The handle was normally painted red while the interior canopy structure was painted grey-green.

A signal gun socket was mounted in the canopy behind the pilot's seat. The cockpit roof lamp was next to the signal port. The entire canopy structure was built as a unit and added to the wooden fuselage shells during the final assembly process.





The pilot's seat was secured in place by two brackets mounted on the ledge behind the seat. The small handle on the corner of the seat pan was used to release the shoulder harness via the black cable snaking up the starboard side of the seat. The two V-shaped rods secure the control stick.



The center of the main instrument panel housed the primary flying instruments at the top, followed by the landing gear and flap position indicators, the red landing gear selector, a pair of oxygen indicators, and a single brake hydraulic pressure indicator.

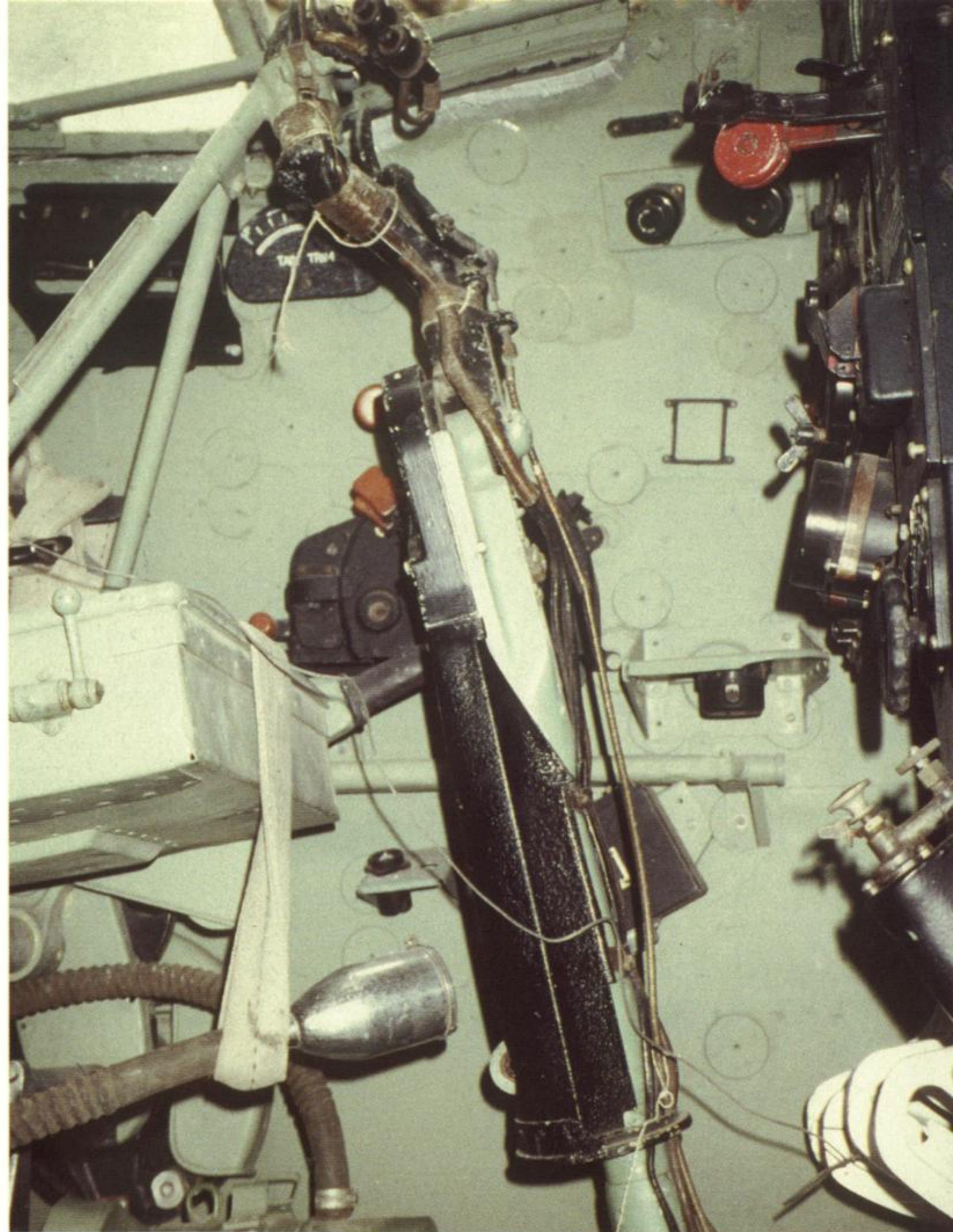
Bomber Control Column



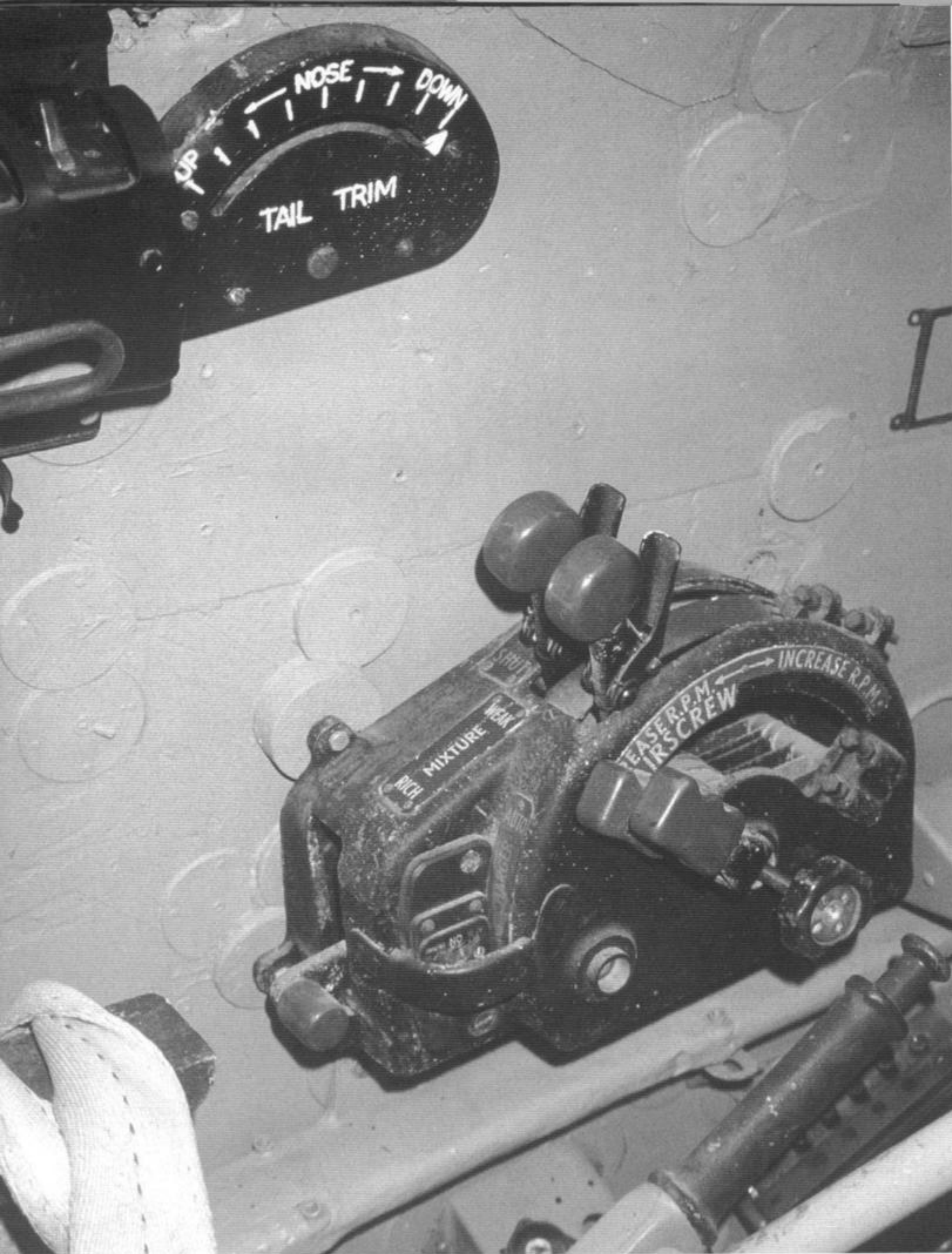
Fighter Control Stick



Rudder Pedals



Mosquito fighters were equipped with a single control stick versus the column and wheel of the bomber and PR variants. The entire stick moved forward and backward, but only the upper half moved from side to side for aileron control — an arrangement similar to that of the single-engine Supermarine Spitfire and Hawker Hurricane fighters.

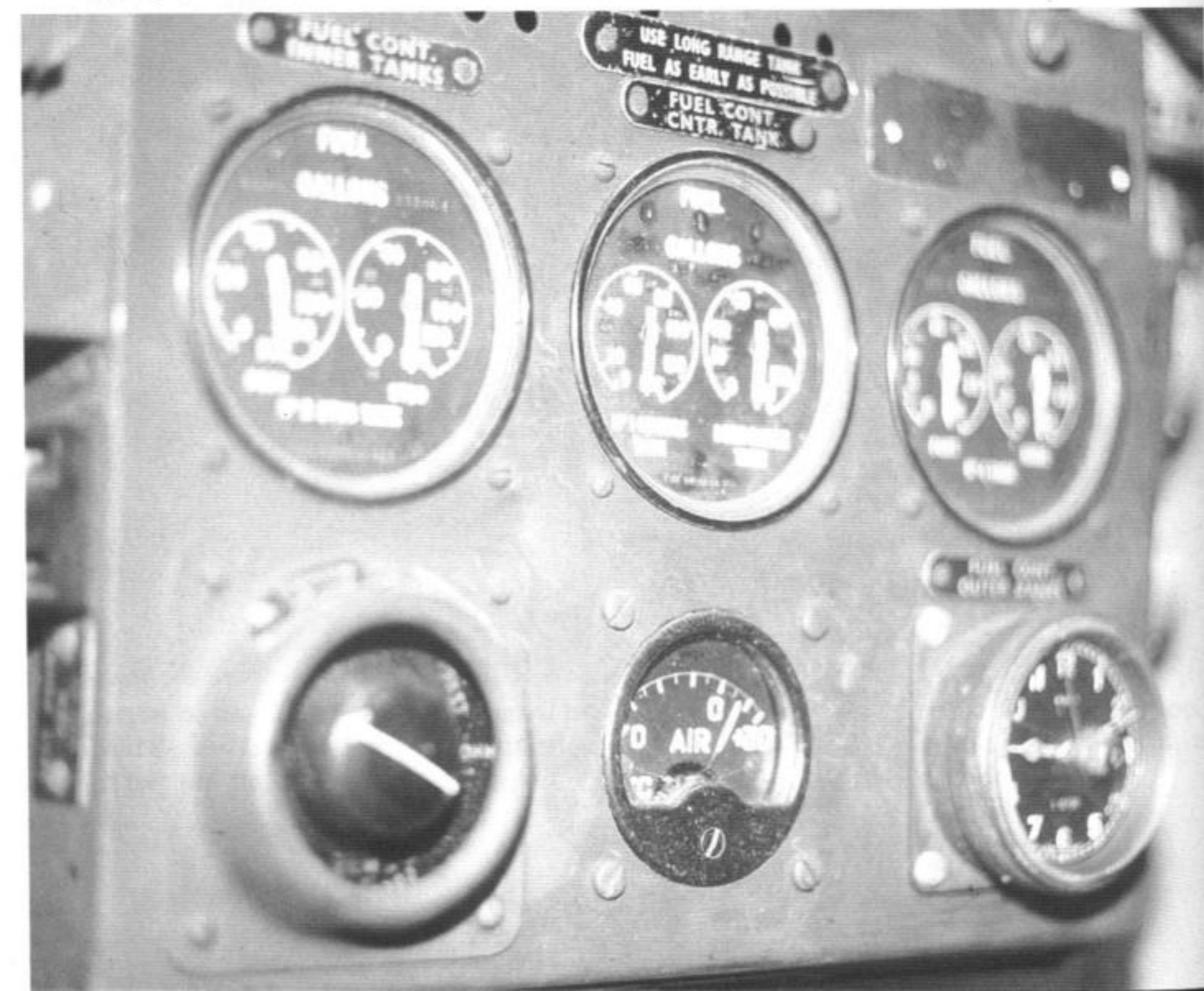


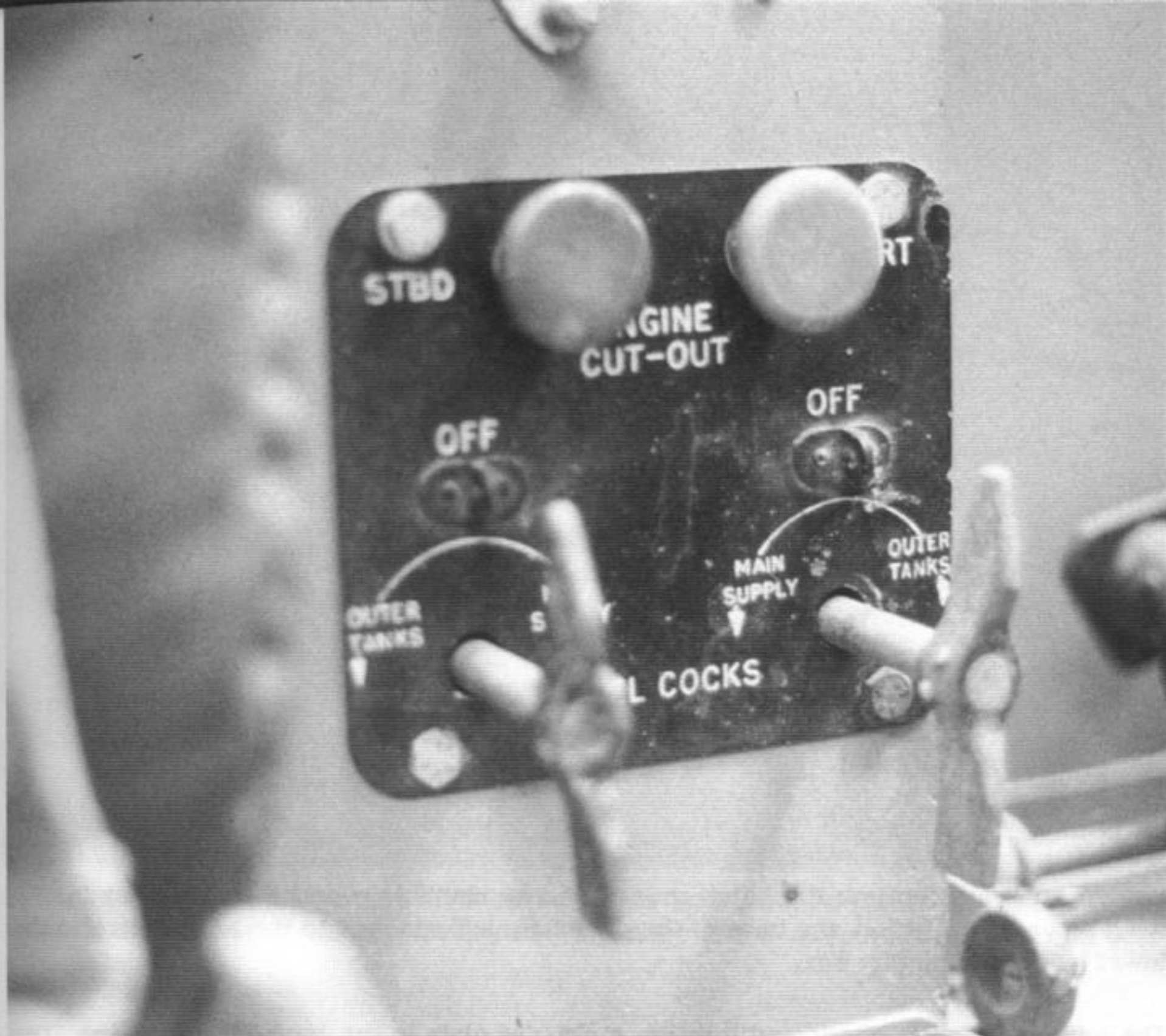
The throttle quadrant is mounted on the cockpit's port sidewall. The two round knobs are the throttles. The two square knobs are the propeller controls. The small lever at the rear of the quadrant controls the fuel mixture. The quadrant is black, while all of the knobs are red-orange.



Additional instruments and controls were mounted on the starboard sidewall above the crew entry hatch. The box contained fuel gauges, ID light switches, the IFF detonator switches — linked with a strip across their top — and red engine fire extinguisher buttons. Just above the box is the lower track for the sliding front quarter window.

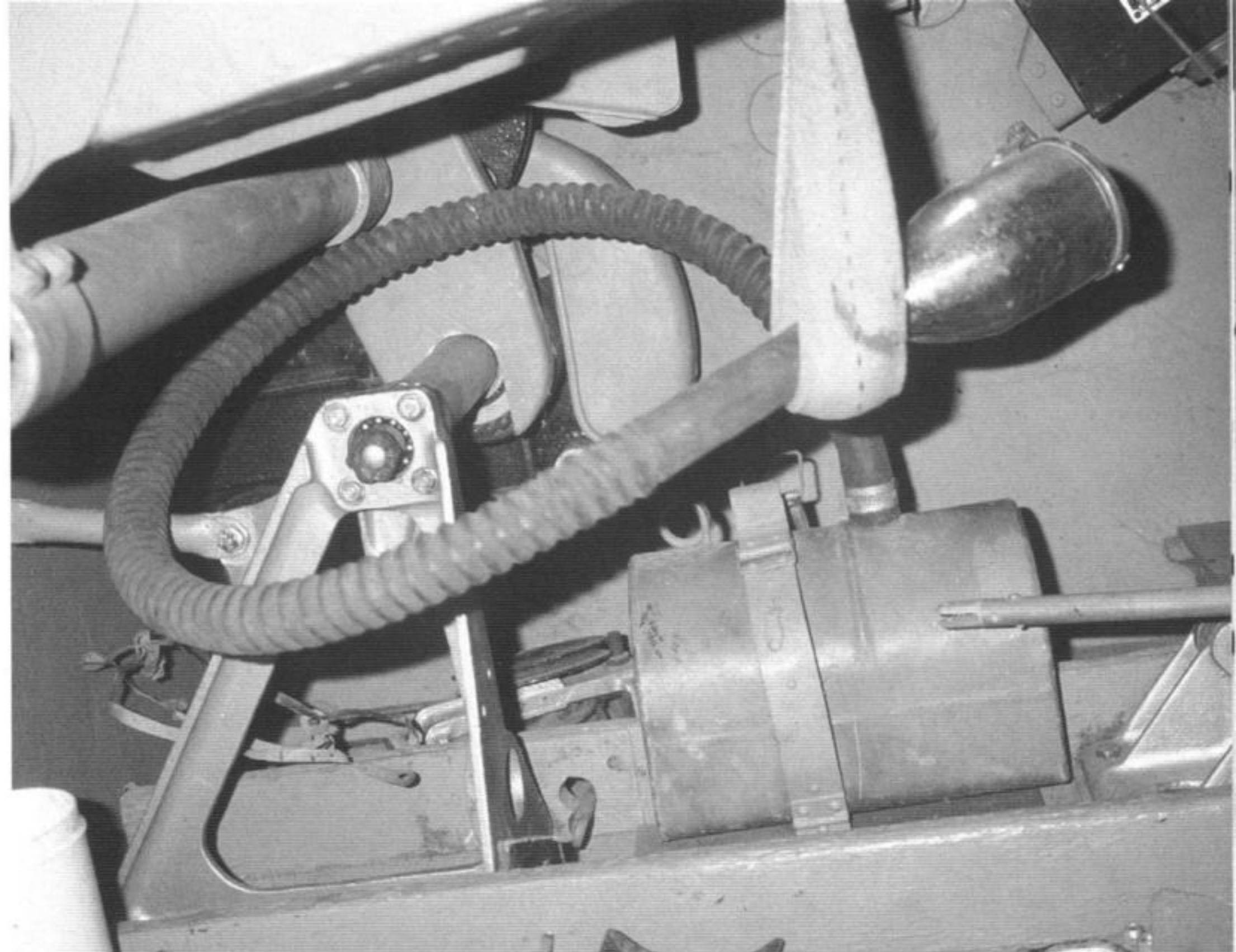
The lower right portion of the box contained the fuel gauges for the inner, center, and outer fuel tanks. The bottom row consists of the windscreen wiper control, an air temperature gauge, and a clock.





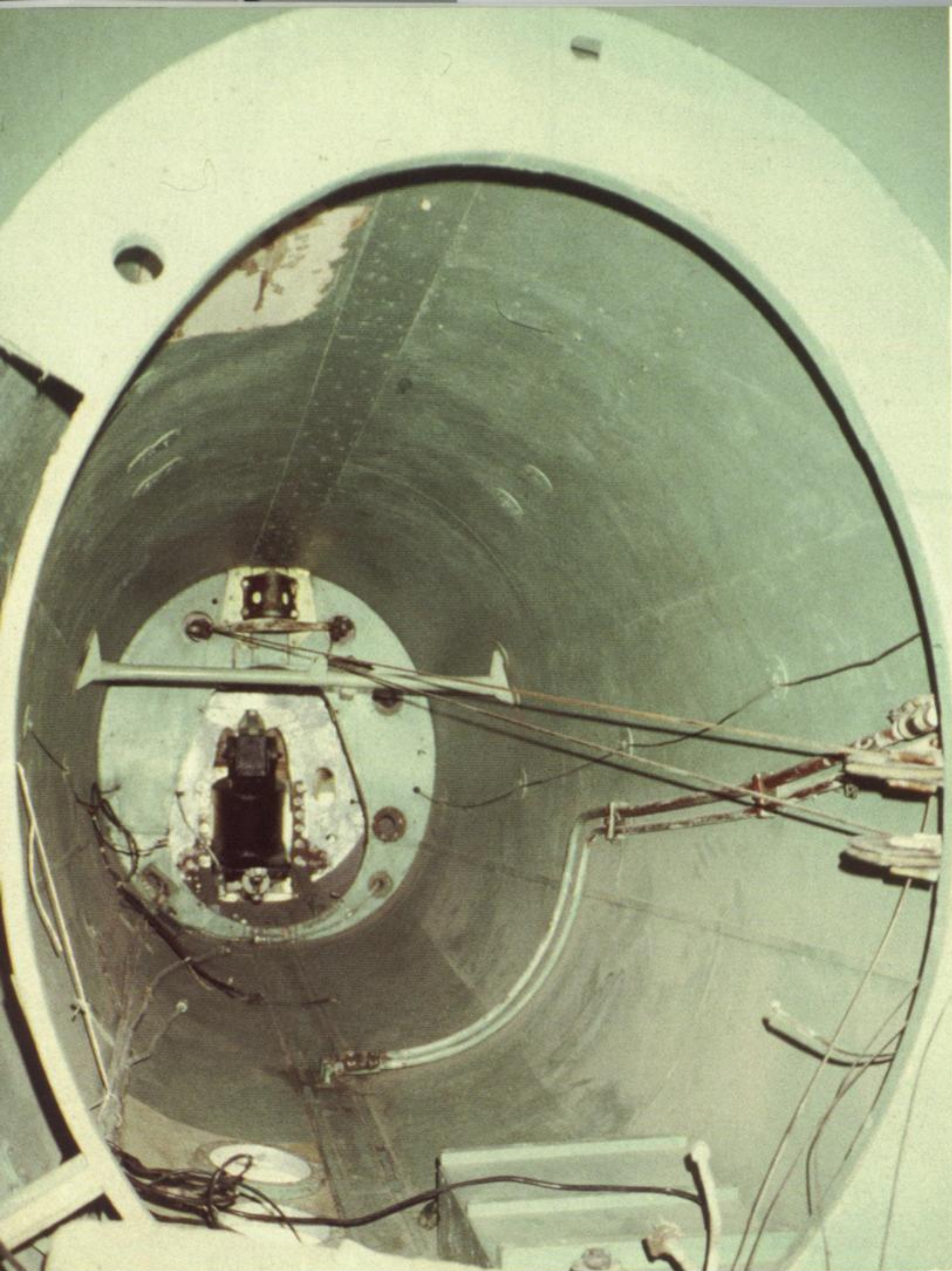
(Above) The fuel control panel was mounted on the bulkhead behind the pilot and to the left of the navigator's seat. The silver fuel cocks allowed the engines to feed from various fuel tanks. The OUTER tanks were used for engine startup, taxi, and flight, while the MAIN SUPPLY tanks used fuel from the inner and center wing tanks. The yellow buttons at the top of the panel were the engine cut outs.

(Above Right) Mosquito flights, especially those of the photo-reconnaissance (PR) aircraft, could be long. The pilot was provided with a relief system mounted under his seat. The system consisted of a funnel, a corrugated flexible tube, and a sanitary tank.

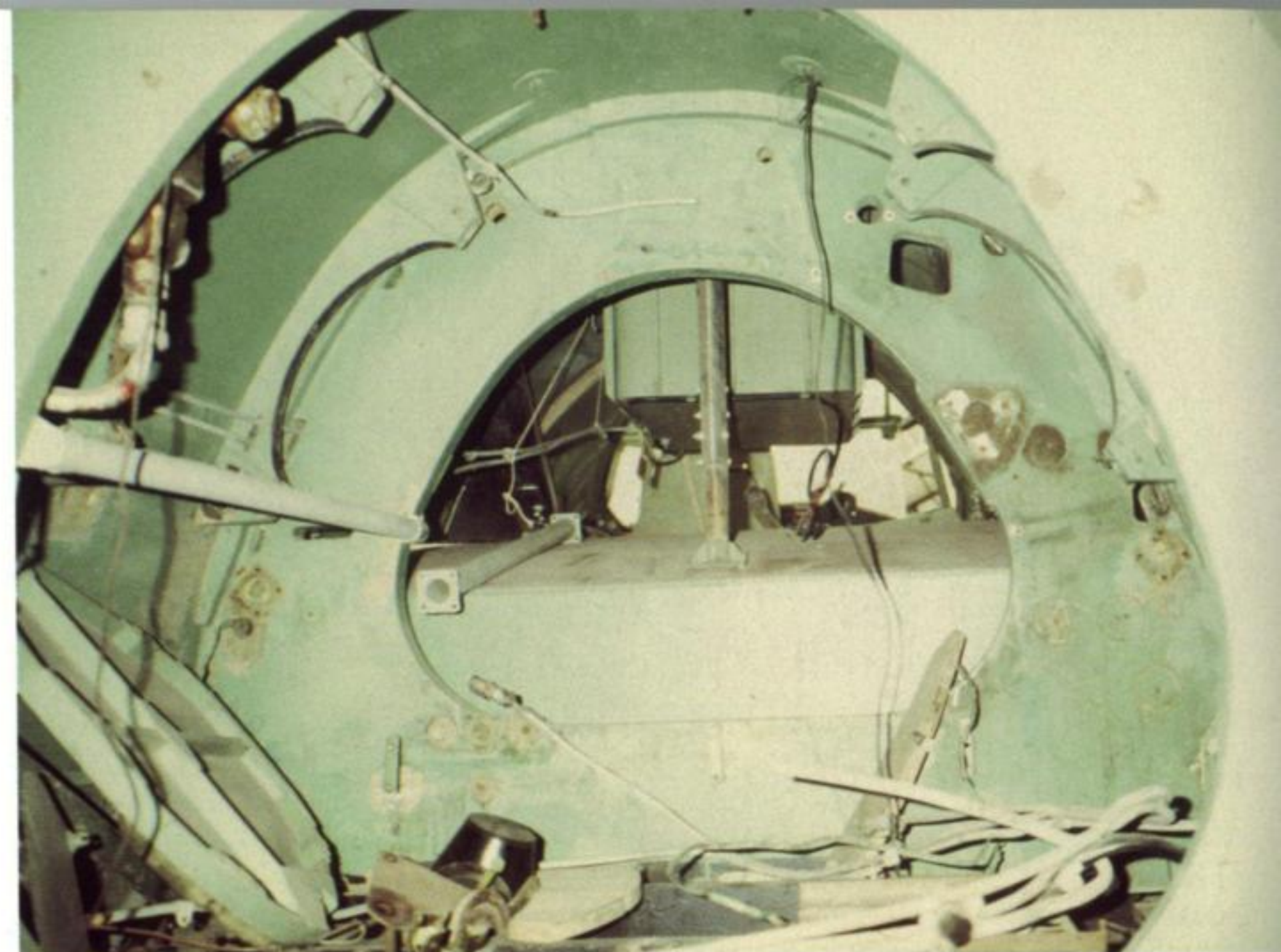


(Right) A fuel gallery was located on the starboard side of the bomb bay. The system provided pressure refueling for the inner tanks, constant fuel pressure to the engines, and a low fuel pressure warning to the pilot.



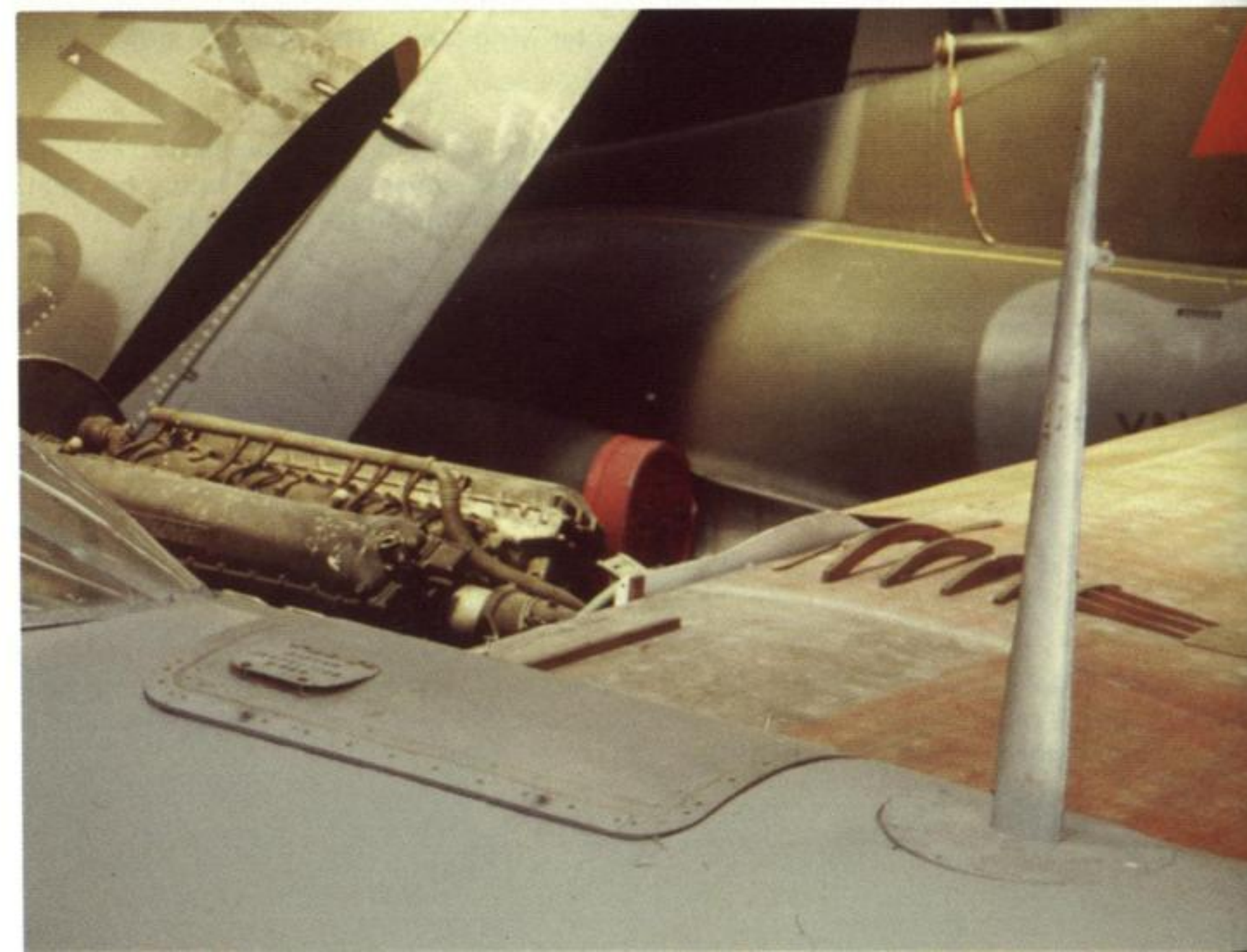


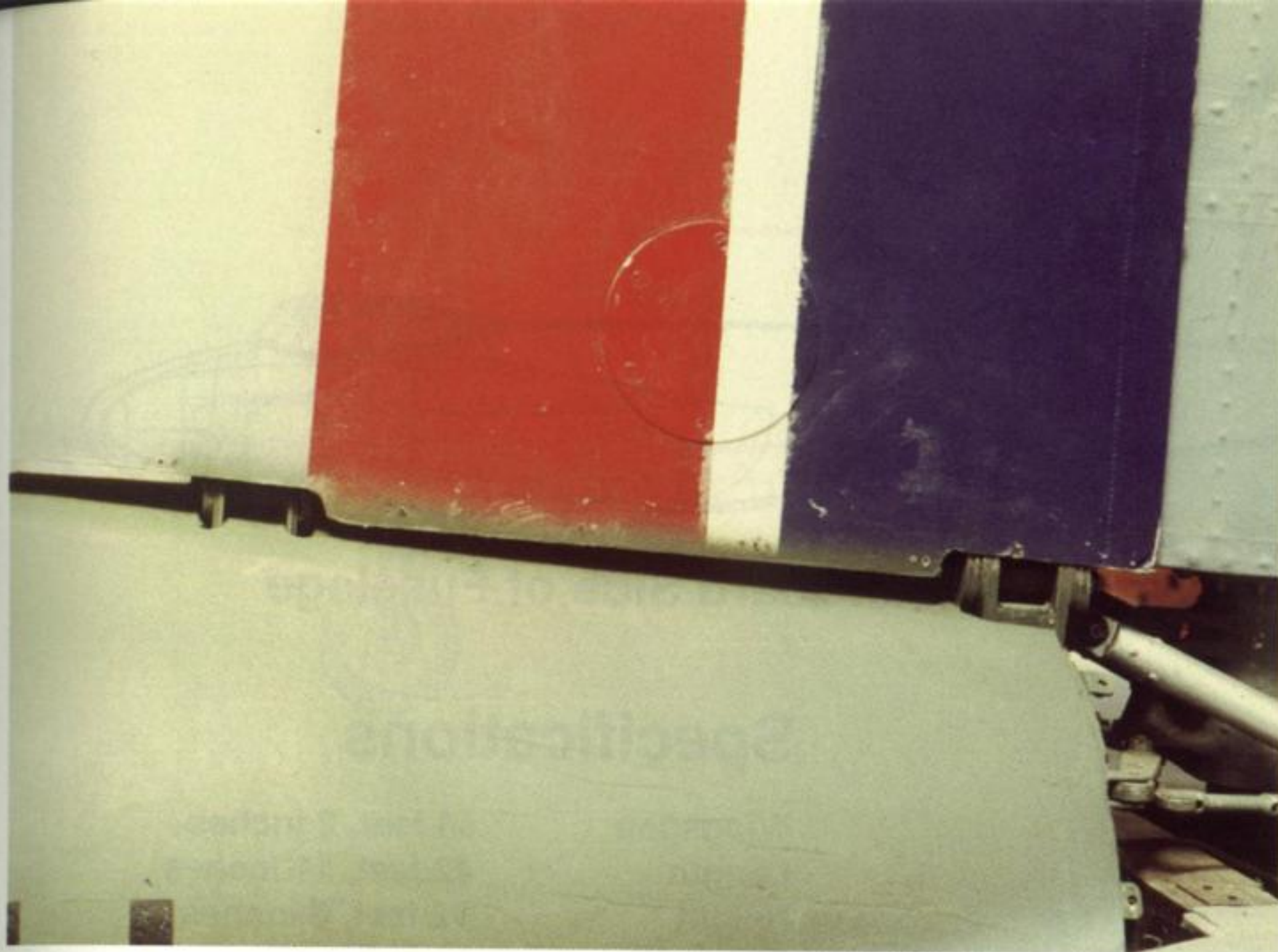
Looking back through the starboard side aft fuselage hatch reveals the rudder cables and pulleys, electrical lines, and black cover over the tail wheel strut. The interior of the wooden fuselage was painted grey-green.



Looking forward through the hatch reveals the numbers four and three bulkheads, the wing box center section, the base of the antenna mast attached to the wing box, and the lower half of the dinghy box.

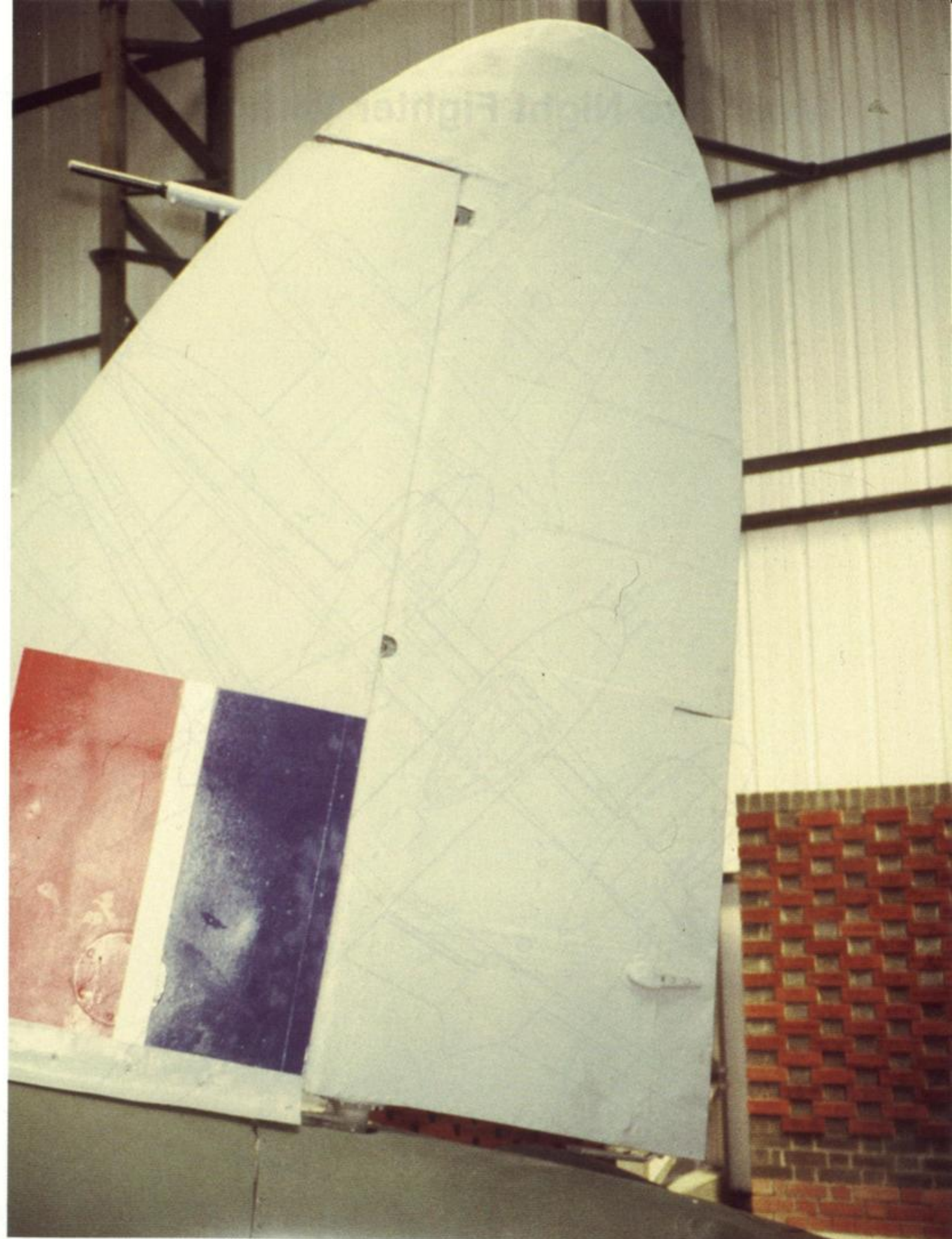
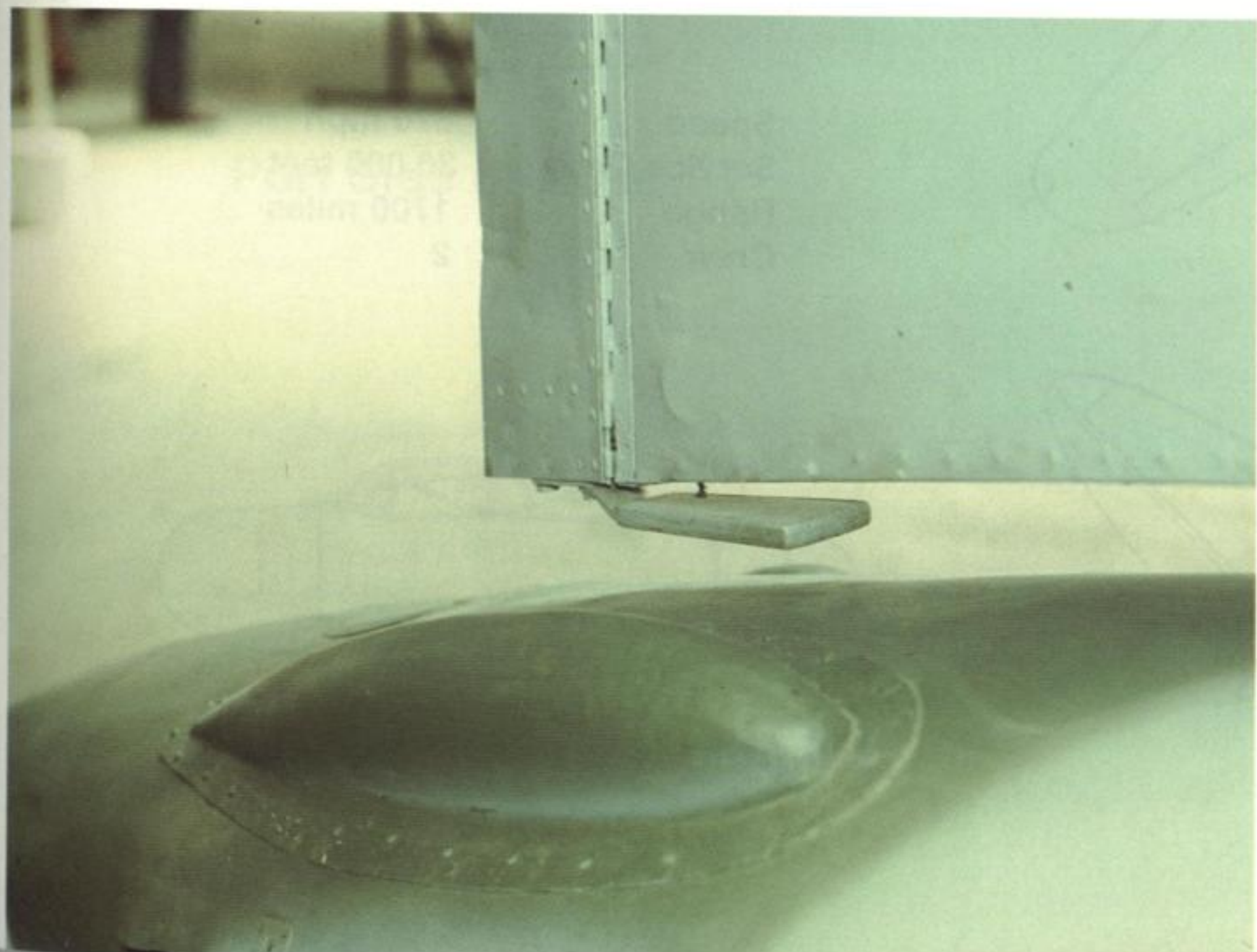
The antenna mast is channeled through a circular plate in the top of the fuselage. The dinghy hatch was located in front of the antenna mast. The small cover plate in the dinghy hatch lid permitted inspection of the dinghy's CO2 inflation bottle.





Lugs at the base of the vertical fin's front and rear spars were attached to the top of the number six and seven fuselage bulkheads. The base of the vertical fin was covered with a metal fairing.

The metal rudder trim tab was fitted with a small mass balance projecting forward under the rudder.



The light alloy rudder frame is entirely skinned with metal. The actuating rod for the metal trim tab was located on the port side of the rudder. Early Mosquitos had fabric covered elevators and rudder, but these were replaced by metal skins when high diving speeds began ripping the fabric off the frames.



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